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Isaac Brokaw, Jersey Clockmaker

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In the homes of many old families of Somerset, Middlesex, Union and Essex counties may still be seen tall case clocks, popularly known as grandfather's clocks, the handiwork of Isaac Brokaw. Of graceful design and artistic finish enhanced by the patina of age, they display a dignity of which their owners may well be proud. Although the works are generally incased in solid or veneered mahogany with little or no ornamentation, some are found decorated with exquisite inlays combining box, ebony, tulip, amethyst or other rare woods. Only infrequently do we meet with cases of walnut, curly or birdseye maple.

Isaac, one of the five sons of John and Sarah Brokaw's family of nine children, was born in Hillsborough Township, Somerset County, New Jersey, in 1746 and died in Rahway in September 1826.[1] He was married about 1766 to Elizabeth, daughter of Aaron and Elizabeth (Hatfield) Miller, of Elizabethtown, New Jersey.

It was with his future father-in-law, clockmaker Aaron Miller, that Brokaw learned his trade. As apprentices were generally indentured between the ages of fourteen and sixteen, it may be assumed that he began his apprenticeship not earlier than 1760 or

THE WRITER, a trustee of the Society, has been its corresponding secretary for the past seventeen years. Mr. Hutchinson is well known as a student of New Jersey history and bibliography, and author of several earlier PROCEEDINGS articles. A resident of Elizabeth, he was active in the shipping business until his recent retirement.

[1]Buried September 18, 1826, aet. 80 years. Sexton's record, First Presbyterian Church, Rahway. No marker is found in the cemetery.

later than 1762. It would appear, in his case, that the relationship existing between master and 'prentice was more like that of father and son. This is suggested not only because of Isaac's marriage to his master's daughter, but also by the provisions of Aaron Miller's will, which leaves "[to my] son Cornelius and my son-in-law Isaac Brokaw my clockmaking tools."[2]

That Isaac was taught by one of considerable versatility in the field of mechanical arts is disclosed by the following announcement:

> Aaron Miller, clockmaker in Elizabethtown, East New Jersey, makes and sells all sorts of clocks, after the best manner, with expedition:—He likewise makes compasses and chains for surveying; as also church bells of any size, he having a foundry for that purpose, and has cast several which have been approved to be good; and will supply any person on a timely Notice, with any of the above Articles at very reasonable rates.[3]

Shortly after his marriage, Isaac moved from Elizabethtown to his native village in Hillsborough Township, where he embarked upon the business of clockmaking. Inasmuch as we find an Isaac Brokaw described as a "silversmith" who had an account with John Vanderveer, merchant of Somerset County, running from 1769 until 1771,[4] the question arises: Did Isaac combine silversmithing with clockmaking, or was the silversmith a different person?

Although the writer has never seen a Brokaw clock bearing any indication of its Hillsborough origin, it is definitely established that Isaac was making clocks in that place early during the Revolution.

> The Province Congress in 1776 ordered that the Committee of the Township of Hillsborough, in the County of Somerset, do leave in the hands of Mr Isaac Brokaw, clockmaker, thirty pounds weight of lead, he having represented to the convention that he could not carry on his trade without such quantity. Saturday, July 27 [1776].[5]

After the deaths in 1779 of both his father-in-law Aaron Miller and his brother-in-law Cornelius Miller,[6] also a clockmaker,

[2]*New Jersey Archives* (hereafter referred to as *N.J.A.*), First Series, XXXIV, 346. Will dated August 28, 1777, proved June 28, 1779.

[3]*Ibid.*, XII, 418.

[4]John Vanderveer ledger, folio 317. Rutgers University Library.

[5]*Minutes of the Provincial Congress and the Council of Safety of the State of New Jersey* (Trenton, 1879), p. 523.

Elizabethtown was bereft of persons in this business. Embracing the opportunity thus afforded, Isaac promptly moved to Elizabethtown and proceeded to occupy the old shop in which the days of his apprenticeship had been spent. Here he continued to ply his trade until 1788 or 1789 when he moved to Bridgetown, now part of Rahway, leaving his son John in charge of the shop in Elizabethtown. After moving, he continued to make clocks until about 1816, when he turned over the business to his son Aaron.

Isaac and his wife Elizabeth (Miller) Brokaw had four children, John, Aaron, Cornelius and Ann. The sons followed in their father's footsteps, learning from him the art of clockmaking. John was born in Hillsborough Township in 1767, was married August 10, 1788, to Rebecca, daughter of Andrew and Sarah (Ross) Miller of Westfield, New Jersey.

He worked with his father in the Elizabethtown shop, taking over the business in 1788 or 1789. An item in *Antiques Magazine*[7] refers to a tall clock bearing the inscription "John Brokaw, E. Town." Penciled or scratched inside the case is the date May 5, 1803, below which are intials "J.B." These notations may indicate the date when the clock was made or sold. Upon his father's retirement about 1816, John moved to Rahway where he continued to make and repair clocks. The date of his death is not known to the writer.

Aaron Brokaw, born in Hillsborough Township, June 23, 1768, was married about 1790 to Elizabeth, daughter of Phebe Tooker (Tucker?). He continued clockmaking until his death in Rahway, December 18, 1853.[8] A direct descendant has stated that Aaron acquired all of his father's tools, among which was an ingenious gear-cutting machine that Isaac had devised early in his career. Upon Aaron's death, this device, together with a chest of tools, was acquired by one Patrick Clark, a repairer of clocks and watches who died at Scotch Plains in March 1887.

[6]Aaron Miller's will was probated June 28, 1779. Cornelius was buried in the yard of First Presbyterian Church, Elizabeth, April 23, 1779 (sexton's record). No marker is found.

[7]May, 1944, p. 270.

[8]Sexton's record, First Presbyterian Church, Rahway. His wife was born November 24, 1774, and died October 13, 1854.

Cornelius Brokaw was born in Hillsborough Township September 27, 1772, died in Plainfield, N.J., April 9, 1857, and is buried in Rahway. He was married to a daughter of Daniel Tucker, who died April 1817.[9] His second wife was Martha Miller, daughter of Jonathan Terry, and widow of David Miller.[10] For many years he made and repaired clocks, either alone or with his brother Aaron. Several clocks bearing his name have been seen by the writer. Sometime prior to 1846[11] he retired from business and removed to Plainfield.

Since the mechanisms of the clocks made by Isaac Brokaw and his sons vary little, if at all, in design or fabrication, why is there such diversity in the design and ornamentation of their cases? This is due to the fact that the mechanism alone was made and assembled by the clockmaker, whereas the case was built by a cabinetmaker in accordance with the design selected from illustrations in his books, or made from original designs incorporating the ideas of the purchaser. Doubtless in many instances cost was a deciding factor as to whether the case should be plain or ornate.

While it is probable that cases for Isaac's and his sons' clocks were constructed by various cabinetmakers, only a few bearing their labels can, with any degree of certainty, be identified. These are Richardson Gray, Abraham Rosett, Rosett & Mulford, and John Scudder.

That Richardson Gray of Elizabethtown made cases for some of the first clocks constructed by Isaac Brokaw after his removal from Hillsborough Township to Elizabethtown in 1779 is indicated by a clock which bears his label and has pasted on the inner side of the pendulum door a bill of sale for the clock, signed by Brokaw and dated Elizabethtown, March 22, 1780. Other Brokaw clocks with Gray's labels have been seen, but without indication of the date when the clock was made. However, we know they were all made prior to June 1803, because late in that month Gray sold his business and stock

[9] *Ibid.* The grave was opened April 14, 1817.

[10] She died March 23, 1823, and is buried in the yard of Scotch Plains Baptist Church.

[11] John Littell, *Family Records; or Genealogies of the First Settlers of Passaic Valley* (Feltville, N.J., 1851), p. 17.

to Burrows & Howell.[12] Richardson Gray, son of John and Amy (Richardson) Gray, was born in 1754 and died June 21, 1818, in his sixty-fifth year.[13] His wife Elizabeth was born in 1755 and died January 9, 1831, in her seventy-seventh year.[14]

Although Burrows & Howell may have made cases, none has been found with their name. Shortly after Gray disposed of his business, a newcomer, Abraham Rosett, established a cabinet shop in Elizabethtown and his label has been found in Brokaw clocks. In the initial announcement of the opening of his shop he used as its preamble an innovation unique in the advertising of that day—a paraphrase of Hamlet's soliloquy:

To brag or not to brag . . . that is the question, whether it is nobler to be passive and patient, wait the calls of custom, or swell the columns of a newspaper with feats of workmanship beyond compare.

A. Rosett, Cabinet-maker
Near the Stone-Bridge

Having, since his residence here, received a small share of patronage unasked for, though he trusts not unmerited, acknowledges the favor, and solicits a continuance, hoping by a proper attenion to business to claim a larger share, which will enable him to open, upon a more extensive scale, and thereby advance his own interest, to the satisfaction of those who may honor him with their commands.

Furniture finished in as much taste, on as short notice, and at as light a rate as may be had anywhere—Produce received in payment—Mahogany boards, plank & joists for sale. Elizabethtown, Feb. 13, 1804.[15]

On March 12, 1807, he published the following announcement:

The subscriber having taken into partnership Abraham Marsh Mulford, the cabinet making business formerly conducted by him will, in future, be carried on under the firm of Rosett & Mulford, at the same place where continuance of favors are still solicited . . .

Abraham Rosett.[16]

A notice in the local paper discloses that this association lasted only one year: "The partnership of Rosett & Mulford will expire on the 12th day of March next—a settlement of their accounts will of course be necessary. The business will be continued by

[12]*New Jersey Journal*, Elizabethtown, June 28, 1803.
[13]*Ibid.*, June 30, 1818; also gravestone inscription, St. John's Episcopal churchyard, Elizabeth.
[14]*Ibid.*, January 11, 1831.
[15]*Ibid.*, February 14, 1804.
[16]*Ibid.*, March 17, 1807.

the subscriber at the same place. Abraham Rosett."[17] A clock by Isaac Brokaw has been seen bearing the Rosett & Mulford label. Rosett continued in business until his death. He was born in 1781 and died at Elizabethtown April 8, 1815. His wife Susan was born in 1786 and died in New York City April 26, 1847. Abraham Marsh Mulford was born May 8, 1794. He was married to Jane, daughter of John Burrows, January 31, 1808.[18] She was born in 1788 and died May 13, 1850.[19] Abraham died March 9, 1863.[20]

Although John Scudder's label has been found in several cases made for Isaac Brokaw clocks, and in one or more cases made for his sons John and Cornelius, little is known of his life. He was born in Westfield, New Jersey, about 1773, and since he occasionally suffixed "Jr." to his name, it may be suspected that his father's name was also John. He was married first on January 29, 1794, to Chloe Sayres.[21] His second wife, to whom he was married on March 24, 1811,[22] was Susanna Miller. Sometime after 1815 Scudder and his family moved to Ohio.[23]

While the foregoing is offered merely as a compendious account of an early artisan, it is noteworthy that in 1776 at the early age of thirty, Isaac Brokaw's repute and competence in the field of clockmaking were recognized by the Provincial Congress. He attained the distinction of being the first to pursue his art in Hillsborough and Rahway, and was the second in Elizabethtown to ply that craft. That his proficiency was inherited by his sons is attested by their having continued the family name in the annals of New Jersey clockmaking until 1853, a total period of over three-quarters of a century.

[17]*Ibid.*, February 16, 1808.

[18]*Ibid.*, February 2, 1808.

[19]*Ibid.*, May 14, 1850.

[20]Both are buried in the yard of First Presbyterian Church, Elizabeth.

[21]She was born in 1778 and died September 28, 1810. William K. McKinney, et al., *Commemorative History of the Presbyterian Church of Westfield, 1728-1928* (Philadelphia, 1929), p. 446.

[22]*Ibid.*, p. 451. She was a daughter of Andrew and Sarah (Ross) Miller of Westfield, and a sister of Rebecca Miller, wife of John Brokaw (son of Isaac). Littell, Second Supplement, p. 510.

[23]Littell, Second Supplement, p. 510. He was living at Westfield in 1815 when his daughter Sarah was baptized.

The Flying Jerseyman

Dr. Solomon Andrews of Perth Amboy

MARY KINGSLEY

In the 1860's Broadway at Canal Street was as fashionable a place for an afternoon promenade as Fifth Avenue at 59th Street is today. On June 5, 1866, the parade of belles and beaux was briefly interrupted by a startling apparition in the skies. The New York *Times* for June 6 carried an account of the incident:

About 5 P.M. yesterday the promenaders on Broadway were astonished at the appearance of apparently a large fish sailing in the air about 1500 feet over their heads. The commotion along that great thoroughfare was tremendous. The usual calm sedate frequenters, with heads thrown back, were eagerly gazing skywards, and in consequence many collisions occurred. The fair sex seemed to become oblivious of the presence of the fashionable swells, and in their abstraction run their sunshades into their eyes; while the gentlemen equally absent-minded played sad havoc with the hoops and other various appendages of the perambulating milliner's frames and while the fish continued floating over the city it was nearly impossible to find a person who was not intently watching its movements; some even attempting to keep one eye on it and the other on the ground. All this commotion was caused by the second successful attempt of Dr. Andrew's Aereon, or flying ship, from the corner of Greene and Houston streets yesterday at 5 P.M. About that hour the Doctor accompanied by C. M. Plumb, secretary of the Aereon Navigation Company, started on an experimental trip to test some improvements which were necessary in the rigging. About 100 persons only were present in the enclosure, but quite a mob was gathered outside.[1]

The inventor and pilot of this balloon novelty was Dr. Solomon Andrews of Perth Amboy, one of New Jersey's forgotten geniuses. His lifelong ambition was to invent a "flying ship" that could be steered even against the wind. Decades later when such a balloon was perfected, we called them dirigibles.

The first balloon ascensions had been made in the 1780's; they were either captive balloons or their flight was at the mercy of

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[1]New York *Times,* June 6, 1866.

the prevailing winds. For decades men had been working to perfect some device by which balloons could be steered. A patent for steering a balloon had been granted to Muzzio Muzzi in October, 1844. He proposed to steer by means of inclined planes attached to cords. One history of aeronautics credits him with having "inspired the later endeavors of Solomon Andrews."[2]

Solomon Andrews, born at Herkimer, N.Y., on February 15, 1806, was the son of the Reverend Josiah Bishop Andrews, M.D., of Southington, Connecticut, and May Bissell Andrews of Windsor, Connecticut. A graduate of Yale in 1797, Josiah Andrews came to Perth Amboy after obtaining his M.D. from Columbia's College of Physicians and Surgeons in 1816. He was installed as pastor of the Presbyterian Church on June 16, 1819, and his pastorate terminated on December 19, 1822, after a difference of opinion with the congregation. He remained in Perth Amboy practicing medicine until 1829 when he returned to his old home in Connecticut.[3]

In that year his son Solomon Andrews earned his medical degree from the old College of Physicians and Surgeons in Barclay Street where he studied under Dr. Valentine Mott.[4] That year, too, he married Harriet Johnson of New York.[5]

Solomon's flying ambitions dated back to a still Sabbath afternoon in his father's church when the boy's attention wandered from the sermon to watch through the window the rapid flight and majestic swoops of an eagle. That day he resolved, "Not till I have the wings of a bird will I be at rest."[6]

More than forty years later Solomon Andrews wrote a book called *The Art of Flying* in which he told of his early efforts to explain to the world his theories of flight. His first experiments were with paper kites; next he approached some of the prominent balloonists asking for their assistance in developing his ideas. He wrote:

> In the year 1830, Mr. Charles F. Durant made an ascension in a balloon from Castle Garden, N.J. and landed in South Amboy, N.J. My plan

[2]Jeremiah Milbank, *The First Century of Flight in America* (Princeton, 1953), p. 80.
[3]Harlan G. Mendenhall, *Presbyterianism in Perth Amboy*, p. 19.
[4]Article entitled "Aerostation," scrapbook on Dr. Andrews, Institute of Aeronautical Science.
[5]W. Northey Jones, *History of St. Peter's Church in Perth Amboy*, p. 186.
[6]*Ibid.*

for aerial navigation was then submitted to him, and it was proposed that he should try the principle by an attachment to his balloon in a simple and economical way in his next ascent. But he had no faith in it and declined the proposition. Shortly after a letter was written to Mr Clayton, the aerialist at Cincinnati, Ohio, divulging the plan to him. And proposing that he should test it with his balloon, at the same time offering to pay all additional expenses; but no answer was received.[7]

Before studying medicine Solomon Andrews had worked for a few years as a watchmaker, an occupation in which he gained skill and aptitude with tools. Never forgetting his dream to perfect a flying machine, Andrews turned his attention to other mechanical devices that needed improvement. Over a period of years he invented and patented barrel-making machinery, a sewing machine, fumigators, forging presses, velocipedes, gas lamps, a kitchen range, and combination locks. The latter were his most noteworthy achievement and from their sale he earned money enough to support his expensive experiments in aviation.

There are varying accounts of Dr. Andrews' "unpickable" combination locks. One says that in 1832 a chest containing a thousand dollars was sealed with an Andrews lock, chained to a lamp post at the corner of Broad and Wall Street and a public challenge was issued to the effect that anyone seeking that sum could try to break the lock and help himself. The lock is supposed to have resisted all efforts to pick it.[8] Another account says that in 1836 a large poster offered a reward of five hundred dollars to anyone who could open one of Andrews' celebrated locks. This time a locked safe was placed in the Merchant's Exchange and left there for two months, where it successfully defied all lock-pickers.[9] Still a third account says that Solomon Andrews "invented and patented an unpickable lock, sold it to Hobbes (Hobbs), whose name it bears, and pocketed thirty thousand dollars, in those days quite a fortune."[10]

A clipping from a Newark paper of June 30, 1842, contained an advertisement of the locks made by the firm of *Andrews and Maurice.* For the combined "Snail Lock" the claim was

[7]Solomon Andrews, *The Art of Flying* (N.Y., 1865), pp. 5, 6.

[8]Roger B. Whitman, "He Flew an Airship before the Wrights Were Born," *Popular Science Monthly,* January 1932, p. 18.

[9]Harold E. Pickersgill, *Nova Caesaria and Ompoge Point,* p. 42.

[10]"Aerostation."

made: "1. They cannot be picked; 2. No false key can be made from any imprints taken through the keyhole; 3. No key can be made to fit any lock, even by the maker of the locks after it has left his possession. Locks for store doors: $8-$12; those for iron safes and chests $10-$15."[11]

The old military barracks in Perth Amboy, built in 1757 and occupied by British soldiers during the Revolutionary War, had fallen into a state of ruin and neglect in the early 1800's. Sometime in the third or fourth decade Dr. Andrews had repaired the buildings and converted them into a factory.[12]

The late Judge Pickersgill tells of an announcement entitled "A New Institution" which appeared in the Newark *Sentinel of Freedom* for May 17, 1848:

> Mr. Solomon Andrews of Perth Amboy has addressed a circular letter to inventors and admirers of skill and ingenuity in the mechanics arts inviting their cooperation in founding an institution for the encouragement of mechanical inventions. Mr. Andrews has at Amboy a manufactory of 2 gallon kegs by machinery of his own invention, which enables him, with only nine men, to manufacture five hundred 2-gill kegs daily from rough timber. He has 2 steam engines, a work shop covering 60,000 square feet of ground . . . 30 acres of land with docking privileges, a dozen or more neat and comfortable houses, a contract with the general government for manufacturing mail locks . . . He proposes to convert his property into the capital of an institution for the encouragement of inventors . . .[13]

This scheme of a co-operative workshop where inventors could work together came to be known as "The Inventor's Institute" and the founder apparently intended it to foster his long-cherished plans for an airship, for on August 10, 1848, Solomon Andrews sent a letter to J. D. Garrison, Esq., secretary of the Mansfield Lodge, I.O.O.F., in Warren County, N.J., appealing to fellow members of the Odd Fellows for help in financing the building of a balloon:

> The Inventor's Institute at Perth Amboy, founded by the subscriber in February, 1847, has now before it a plan for the 'Navigation of the Atmosphere' which it is believed must succeed . . . [It] is an invention of no ordinary magnitude, necessarily expensive in experimenting upon,

[11]Clipping in Pickersgill collection, Perth Amboy Library.
[12]Pickersgill, *op. cit.*, p. 39.
[13]*Ibid.*, p. 42.

and requiring more capital than individual enterprise is likely to furnish. It is, however, now to be attempted by the Institute, and to be put into immediate execution provided the necessary means can be realized . . .

. . . We now claim the credit of having originated this method of travel through the air, and we intend hereafter to claim the credit of being the first to develop the same, by actually navigating the atmosphere in any and every direction, with or against the wind, by means of the invention, in which the power of ascent, descent, locomotion is contained in the machine itself, it being perfectly under the control of the operator.

. . . Are there [he added in conclusion] 90 persons in the city of N.Y. or in the U.S. who, having the means, have also faith enough in the possibility of aerial navigation to induce them to invest $100 each in the experiment, and upon a value equivalent in real estate?

Or can there be found one or more individuals, whether speculators, investors or amateurs, willing to embark on this enterprise, and to furnish the capital upon the foregoing plan, or any other terms than those proposed by the Institute provided the practicability of the investment can be shown to their satisfaction or [that] of any unprejudiced scientific person?

In short, are there any besides 'poor inventors' who believe aerial navigation feasible?[14]

A newspaper account of this letter says that Solomon Andrews predicted the carrying of mail by air, saying that while this navigation of the atmosphere is generally considered too chimerical to apply to the government for aid, if it succeeds it will at once settle the doubtful question of what constitutes a post road, and the government may relieve itself from all embarrassment in the transport of the mails.[14]

Investors must have been found who had faith in aerial navigation for Solomon Andrews records in his book *The Art of Flying*:

In 1849 I erected a building in Perth Amboy, like a ship house in which to build an experiment upon a machine of the kind proposed. The framework of an airship 80′ long, and 20′ wide and 10′ deep was suspended in this building, and the following advertisement put into the New York papers:

> Airship. The public are informed that the Inventor's institute at Perth Amboy, New Jersey, will exhibit on the 4th of July next, and during that day only, the aerial Ship which they are now building, and which they hope to complete during the present summer . . .

[14]Excerpts from a circular reprinted in the New York *Sun*, September 12, 1941.

. . . The plan of the invention was laid 23 years since and has occupied the attention of its projector during that period. Tickets 50¢ each to admit a gentleman and a lady, every additional lady 25¢.[15]

This first balloon was made of thirteen thousand yards of silk which had been woven to order in China.[16] Manufacturing enough hydrogen to fill the bag presented a problem with the primitive equipment then available. Dr. Andrews reports that the gas was made by steam in five iron retorts set in a furnace for that purpose. The process was a slow one and it required two days and nights to fill the envelope. "This was kept five full weeks for experimenting on in the building, but the vessel was never taken out of the house. A small machine, about 12′ long was filled and let go to the upper regions. It was sent toward the sea, and never afterwards heard from."[17]

When the Civil War broke out, Solomon Andrews volunteered and served with the Sanitary Commission transporting sick and wounded in the neighborhood of Harrison's Landing on the James River. There he witnessed what he termed the "lamentable failure"[18] of Professor Thaddeus S. C. Lowe's experiments with observation balloons. Andrews wrote that he returned home to "construct an airship for the use of the government. I did not doubt that I would be authorized to build one on the same proposition as that made by Mr. Ericcson for the *Monitor,* as it would cost 1/40th as much money and would be of more use to my country."[19]

On August 9, 1862, he wrote to Lincoln broaching his plan:

Sir: Having been for years engrossed in the study and experiment on aerial navigation, and long impressed with the duty of producing an aerostat for reconnaissance if nothing more, in aid of the armies of the Union, I can no longer refrain asking the privilege of presenting a well-digested plan for its accomplishment, to the United States government; and if the plan be approved, to solicit an order for its immediate construction.

[15] *Art of Flying,* pp. 5-6.
[16] Roger B. Whitman, "American Airship Pioneers," *U.S. Air Service,* May 1920, p. 29.
[17] *Art of Flying,* p. 7.
[18] *Ibid.,* pp. 7-8.
[19] *Ibid.*

The plan is so simple that the cost will not be much more than that of a common balloon, but it will require secrecy to prevent the enemy from becoming acquainted therewith before our government shall have received its benefits. I have no doubt of being able to give it locomotion in any and every direction, not only in calm weather, but against a considerable wind. As the best evidence of my confidence in the project, permit me to say that I am willing to pledge real estate now in my possession, valued at not less than $50,000, for the success of the undertaking. I will sail the airship, when constructed, 5 to 10 miles into Secessia and back again, or no pay. My cash capital is all invested in the padlock business and in the execution of a contract with the P.O. Department, for U.S. mail locks and keys, or I would build the aerostat on my own account and present it to the government.

Should this proposition so far meet your approbation as to give me a hearing, I will present myself before you, or before any properly authorized official, and make all necessary explanations at such time and place as you may be pleased to name.

I have the honor to be, with great respect,

your very obedient servant, SOLOMON ANDREWS.[20]

He received no answer to his proposal, so he sent a similar letter to Secretary Stanton who told him to send drawings and a description and it would be forwarded to the Chief of Ordnance. They were submitted on September first and Dr. Andrews succeeded in getting an interview with an official from the Bureau of Topographical Engineers. There he was asked what the airship would cost. He replied, "Not to exceed $5000 and he would guarantee its success or no pay." All he asked was an order by the government to construct it. When they asked what motive power he would use, he answered, "gravitation."[21]

On September 8, the Chief of the Bureau of Topographical Engineers submitted a report to the effect that "the device appears to be ingenious in a high degree, but they were not fully convinced of its practical utility."[22] The inventor experienced some annoying delays in getting his drawings back and seemed obsessed with the possibility that they might fall into the hands of the Rebels. On September 22, 1862, he announced that "I intend to build one immediately on my account, and if successful,

[20] *Ibid.*, p. 8.
[21] *Ibid.*
[22] *Ibid.*, p. 9.

I shall present it to the U. S. Government, in the hope that it may shorten the war."[23]

Solomon Andrews' theory of flight was that a balloon should be shaped so as to offer minimum head resistance and maximum resistance to vertical movement. The 1863 ship consisted of three cigar-shaped balloons held parallel to each other. In a narrow basket slung below he had a small ballast car set on tracks so that weight could be shifted readily from one end of the car to the other. By shifting the center of gravity the inventor hoped to achieve an inclination which would enable the balloon to rise along an inclined path, thus obtaining forward motion twenty times as great as the accompanying gain in altitude.[24]

One of the most important innovations of this balloon was to have been the use of balloonets or small separate cells filled with hydrogen to prevent the movement of gas within the big envelop. Dr. Andrews had hired John Wise, one of the most renowned aeronauts of that era, to help with the construction of the gas bag. When the final product failed to meet the doctor's specifications, the balloonet idea was dropped.[25]

This first flyable *Aereon* was completed in May, 1863, and, according to an article written by the inventor's grandson, "Until that time Dr. Andrews, who was now 57 years old, had never been in a balloon of any kind. His knowledge was purely theoretical, and as there was no one to teach him he learned to fly his ship only by getting into it and flying. On the first trial (in June) the gas containers collapsed."[26] In another article in *U. S. Air Service,* his grandson indicates that there were additional trial flights in Perth Amboy in July, August, and September, 1863.[27]

One account says this ship was fabricated of twelve hundred yards of varnished Irish linen, and another says of cambric muslin. In any event the entire cost of experiments and construction was not less than $10,000. Each inflation with hydrogen gas cost from $300 to $530.[28]

[23] *Ibid.,* p. 10.
[24] Whitman, "American Airship Pioneers," p. 29.
[25] *Art of Flying,* p. 10.
[26] Whitman, "He Flew an Airship before the Wrights Were Born," p. 123.
[27] Whitman, "American Airship Pioneers," p. 30.
[28] *Art of Flying,* p. 13.

On August 26, 1863, Solomon Andrews wrote to Lincoln again. He asked that the ship be observed before he destroyed it to keep it from the knowledge of the enemy. He requested Lincoln to select

some suitable, practical person to examine the machine and witness the trial, before I destroy it to keep the knowledge of it from the enemy; so that whatever good there is in it may be reported to the government. I seek no pecuniary interest, nor undeserved fame; I desire only to aid my country and to promote human improvement, to use whatever talent the Lord has given me according to his bidding.[29]

The final experiment was on September 4, 1863, when reporters were sent from the New York papers to witness the final flight of Solomon Andrews' dream ship.

The Webster, Massachusetts, *Times* carried an account of the flight:

Mr. Solomon Andrews, of Perth Amboy, well-known as an ingenious mechanician has been experimenting for some time with a flying machine of his invention, and has, according to the *Herald*, achieved a remarkable success. The machine will carry three persons in addition to the operator, and is in shape similar to three cigars joined laterally; these cigars are capable of containing 26,000 cubic feet of hydrogen, and sustaining a dead weight of 432 lbs. etc. The car attached is 12 feet long . . . and is supported by 120 cords, 16 feet below the balloons or gas cylinders, which are made of varnished linen. The *Herald* reporter says, 'On Friday, the 4th inst., Dr. Andrews made his last experiment and demonstrated to an admiring crowd the possibility of going against the wind and of guiding her in any and every direction with a small rudder, having only 17 square feet of surface. He made no long flight in one straight line lest his *modus operandi* should be divulged; but by a most ingenious plan, demonstrated her capabilities beyond all possibility of doubt whilst he prevented a public knowledge of his method of propelling.'

After a few short flights, to satisfy himself and a few friends that all was right, and that she would do all he had contemplated, he set her off in a spiral course upward, she going at a rate of not less than 120 miles per hour, and describing circles in the air of more than one-and-a-half miles in circumference. She made twenty revolutions before she entered the upper strata of clouds, and was lost to view. She passed through the first strata, about two miles high, scattering them, as she entered, in all directions. In her upward flight could be distinctly seen her rapid movement in a contrary direction to the moving clouds; and

[29] *Ibid.*, p. 11.

as she came before the wind, passing them by with great celebrity. As she was distinctly seen thus to move, both below and above the clouds; all [in] the clear blue sky at 5 o'clock p.m., with the sun shining clear upon her, there could be no mistake or optical delusion to the beholder. As to her propelling power and motive apparatus it behooves us not to speak. It might be considered contraband of war or afford aid and comfort to the enemy, for with such a machine in the hands of Jefferson Davis, the armies around Washington would be powerless to preserve the capitol.[30]

The *Scientific American,* unaware that the ship had been set free with a full lift and the rudder lashed to one side, carried the same account and added, "The reporter doesn't mention Dr. Andrew's descending but we infer that he 'still lives.' " A week later they referred to the machine as a "Lamentable failure." His grandson's account of this 1863 ship does say that she was so quick in obeying the rudder that an intended turn might develop into a complete circle.[31]

Discouraged by the lack of attention in Washington, Solomon Andrews next sent descriptions of his invention "to all the governments of Europe." Only Louis Napoleon replied, so drawings were sent to his minister in Washington.[32]

Dr. Andrews finally succeeded in having a personal interview with Abraham Lincoln. Lincoln asked "If any persons witnessed the experiments, and what were the names of some of them." He added, "Go home and request from 4 or 5 respectable persons to write to me what they saw and I will take action on it."[33]

Upon his return home, Dr. Andrews collected testimonials from John Manning, merchant and ex-postmaster; Ellis C. Waite, architect and builder; N. H. Tyrrell, collector of taxes and constable; S. V. R. Paterson, cashier, City Bank of Perth Amboy; Isaac D. Werd, justice of the peace. The one from the foreman of the United States mail lock factory read: "When she went against the wind she passed the clouds like two trains of cars passing each other. I have never seen anything but a sky-rocket or cannonball go as fast. My only regret is that I did not go up

[30]Webster (Mass.) *Times,* September 19, 1863.
[31]*Scientific American,* IX (September 19 and 26, 1863), 177, 195.
[32]*Art of Flying,* p. 13.
[33]*Ibid.,* p. 19.

SOLOMON ANDREWS' AIRSHIP OF 1863

From an 1864 lithograph showing the *Aereon* "as she appeared on the 4th of September 1863 in his fifth and last grand experiment, when she travelled 30 miles in 14 1/2 minutes at a rate of 124 miles per hour." (Taken from a photostatic copy owned by the Institute of Aeronautical Science, New York City.)

with the doctor when he invited me to get into the car, and that he destroyed the ship."[34]

In December a petition or memorial in behalf of Dr. Andrews' project was presented to the Senate by Senator Ten Eyck and before the House of Representatives by Representative Steele.[34] They brought no results and when the letters of recommendation had not been acknowledged in three months, Solomon Andrews commented bitterly, "Nothing but silent contempt has yet been awarded to the most brilliant inventor the world ever saw, by the best government in the world."[35]

Still undiscouraged the inventor went on harrassing Congress, trying to persuade them that his balloon could be a factor in winning the war. In the early months of 1864 he won the consent of the Military Affairs Committee to a demonstration of a model of his balloon in a basement room at the Capitol and a sub-committee was appointed to weigh and evaluate the merits of his invention.[37]

This Scientific Commission finally reported to Secretary Stanton on July 22, 1864, as follows:

Sir: The commission to whom was referred by the War Department the plan of Dr. Solomon Andrews of Amboy, N.J. for making reconnaissances by means of an aerial vessel, have given due attention to the subject, and now respectfully present the following report: During the present war captive balloons have been used for observing the position, force and deposition of the enemy. The success however of this plan of reconnaissance, according to the testimony of the officers of the Engineering Corps, have not been as full as the method at first sight would appear to warrant. The elevation which could be obtained by a captive balloon, particularly during a windy day, was comparatively so small and the oscillation so rapid, that the use of a spy-glass was unsatisfactory, and the results obtained not sufficiently definite to be entirely trustworthy. To remedy these defects Dr. Andrews, well-known to the Government as one of the most ingenious and successful inventors of this country proposes to use an aerial vehicle, differing considerably from an ordinary balloon. He asserts that with his vessel he can ascend obliquely to a point directly over the enemy's camp, and then return

[34] *Ibid.*, pp. 14-16.
[35] *Ibid.*, p. 16.
[36] *Ibid.*, p. 19.
[37] *Ibid.*, p. 13.

to the point from which he started . . . that his aerial vessel can be propelled through still air at the rate of a number of miles per hour and finally, that it may be steered in a given direction. These propositions appear at first sight, to any person acquainted with the history of the various experiments in aerostation, entirely chimerical, and, indeed, were so considered by the commission when they were first announcd, but after hearing an account of the principle upon which Dr. Andrews founded his invention, and after witnessing the experiments on a small scale, which he exhibited to the commission, they were induced to think that it is not impossible that he can really perform what he has asserted he can do. The model which he exhibited to the commission consisted of 3 hollow cylinders of India rubber, inflated with hydrogen gas. These cylinders were terminated at either end by a hemisphere, the middle and larger one about four feet long and eight inches in diameter. The two side ones were a little less in length but of about the same diameter. These 3 cylinders were fastened together in the form of a raft, the middle one being furnished with a light paper plane, which served as a rudder. The car was suspended under this raft in such a manner that the center of gravity could be shifted each way from the middle toward either end, so that the cylinders might float horizontally or with the forward end pointed obliquely upward, or obliquely downward. The vehicle being inflated with gas and having an extra amount of ascensional power, the car supplied with bags of sand, being so placed that the front end of the aerial vessel would point obliquely upwards, the flight was suffered to take place, when instead of rising vertically, the vessel ascended obliquely in still air, along the line of least resistance in an angle of about 40° to the horizon. By this simple arrangement the ascendability power of the balloon may be considered as resolved into two forces, viz, one vertical and the other horizontal; the latter propelling it in a given horizontal direction even against a current of air, while the former, as in the case of the ordinary balloon, impels it upwards. Dr. Andrews has also fully illustrated the fact to the commission, that his aerial vessel, while passing obliquely through the air, can be steered. This fact, however, might have been inferred as a corollary from the fact of the transmission, since the direction of the body, relative to the medium through which it is moving, must evidently be changed if the resistance on one side is made greater or less than on the other. When the rudder of the model exhibited by Dr. Andrews was slightly turned to one side, the vessel no longer moved in a straight line, but curled around to the right or the left accordingly as the resistance on one side or the other. The commission, however, did not witness any experiments in regard to descending which were as satisfactory as those relative to ascending. The convenience, however, was wanting for exhibiting experiments of this kind, but the com-

mission did not see any reason why they should not be equally successful as those which were presented to them. From these experiments as well as the principles on which they are founded, the commission thinks it highly probable that in moderately still air, Dr. Andrews could ascend obliquely for example, in a Southerly direction, point immediately over the enemy, and by changing the position of the center of gravity of the vessel so that its prow would now point obliquely downward and the aeronaut suffer sufficient gas to escape he would descend as far in a Northerly direction as he had obliquely ascended in the opposite direction. The commission, however, are not prepared from experiments on so small a scale to vouch for the value of the invention of Dr. Andrews. They are well aware of the fact, from abundant evidence, that though the general scientific principles on which an invention of this kind rests, may be correct and apparent success may attend it in the case of the model, unforeseen difficulties may arise in carrying out the plan into actual practice which no ingenuity can overcome. It is true that Dr. Andrews has presented to the commission the testimony of a number of gentlemen who stated that they witnessed a successful experiment on the part of the doctor in a large balloon of the kind proposed; but such testimony will not suffice for the report to Congress involving an expenditure of money, and the facts represented by the commission must not be second-hand; however, that there is sufficient probability of the success of the plan of Dr. Andrews to warrant the attempt to carry it into practice on a sufficiently large scale thoroughly to test the question, and would therefore recommend a suitable appropriation for that purpose.

Very respectfully,

A. D. Bache, *Superintendent of Coast Survey,*
Joseph Henry, *Secretary of the Smithsonian Institute,*
J. C. Woodruff, *Major of Engineers.*[38]

Somehow the original report from this committee was mislaid and Dr. Andrews was requested to forward his copy to the chairman of the House Military Affairs Committee. Then he was told that they could not act on his copy. He went to Washington in person on January 22, 1865, to try and obtain the original report.[39] He encountered a snarl of red tape which left him discouraged, and a letter from a member of the Military Affairs Committee received in late March did nothing to brighten his prospects:

[38] *Ibid.*, p. 25.
[39] *Ibid.*, p. 27.

March 22, 1865

DEAR SIR:

. . . Nothing was done in regard to the aerial ship, I found, after various discussions, that I stood alone in my committee as a friend and favorer of the project, willing to make or recommend an appropriation for testing the invention in actual practice. Some of the committee made distinct and positive opposition; others were willing that I should make a report, but on my own responsibility, and without the support of the House of Representatives, and all but myself were incredulous.

Under these circumstances, I thought it most advisable not to bring the subject forward for what promised to be but a hopeless effort against doubt and prejudice.

Expecting yet someday to witness successful aerial navigation conducted on the principle of your invention, I am very respectfully yours,

ROBERT C. SCHENCK.[40]

In the *Art of Flying* Dr. Andrews carries on the sequence of events:

. . . At the time of the reception of Mr. Schenck's letter my left arm was broken, having been thrown out of a carriage and I was thus prevented from any further immediate action. But I embraced the earliest moment in preparing the foregoing publication [*Art of Flying*] in the furtherance of my plans for developing aerial navigation to the world. Surely it will not and cannot now be considered contraband of war to make an expose of this invention to the public. The Executive government has declined it. Congress has declined it. They have refused it even as a gift. The war is near its close. The end of the rebellion is at hand, for its "back bone" is dislocated at every articulation. And there is no reason why this invention should not be introduced for peace purposes in aid of the extinguishment of the enormous war debt. Its greatest value is for commercial purposes; and it must now be brought into use for the benefit of mankind.

To do this in the surest and most effective way, I propose to form an aerial navigation company, and to establish a regular line between the cities of New York and Philadelphia . . .

. . . When the whole thing becomes known to the public, I expect to lose credit for ingenuity because of its simplicity. But I mean to entitle myself to credit for faith and perseverance.

On page thirty of this same book there is a paragraph that pretty well sums up Solomon Andrews' whole philosophy:

The real and true inventor is never foiled except by sickness or death. His ingenuity and perseverance are equal to all emergencies. His greatest

[40] *Ibid.*, p. 23.

pleasure is in overcoming difficulties. Mountains he imagines to be molehills, and by faith he makes them so, as did the immortal Kepler when he climbed the most eccentric orbit of the universe on the conic section. When he announced his great laws of the planetary system he said 'I can well wait a century for readers, since God has waited nearly 6000 years for an observer.' So may I well afford to wait God's time, as I have done, for the development of aerial navigation, since He has honored me as its inventor or discoverer. Though like a pent-up volcano, ready to burst forth like an overwhelming torrent, held back for the last 2 years by only patriotic scruples, I bide my time.[41]

And while he was biding his time he was thinking up the organization plan for the Aerial Navigation Company, a unique combination of practicability and philanthropy. It was practical because he was out to raise funds to build an airship which was to navigate between New York and Philadelphia. He offered investors two-thirds of the patent right, reserving one-third for himself with the proviso that he was to supervise construction and navigate the ship. He reminded investors that "If the invention is worth anything it is worth millions of dollars, and will bring the money as soon as one successful trip is made between the two cities." He urged them "to lay aside prejudices against inventors and inventions [so] as to risk a trifle, and have the moral courage to carve their names on the temple of fame, as well as to secure the chance of a fabulous fortune."[42] To promote the sale of stock lithographs of the 1863 ship were offered for sale at the studio of A. A. Turner, Broadway photographer. Solomon Andrews announced that he was available for interviews at his office at 11 Walker Street, New York.

On the philanthropic side he reverted back to his plan of 1847, the founding of an Inventor's Institute. A stockholders' resolution of October, 1865, indicated that one-half the profits of the company were to be used for the founding of such an institute. When one-half the profits reached the sum of $100,000 they were to be used to found Industrial Colleges "for the education and maintenance of orphaned and indigent children of both sexes and all races from 8-18 years inclusive."[43]

[41] *Ibid.*, pp. 28-30.
[42] *Ibid.*, p. 31.
[43] Aerial Navigation Company minute book, Institute of Aeronautical Science, pp. 19-20.

The sum of $18,000 was raised to finance the new enterprise. Solomon Andrews is listed as owning twelve thousand dollars' worth of stock and there were thirty-one or thirty-five other investors, most of whom contributed fifty or a hundred dollars. The certificate of incorporation indicated that the company was to "Engage either directly or through the agency of other corporations or of individuals as far as may be possible, wise and profitable, in the transportation of passengers, merchandise and other matter from place to place."[44]

Judge Pickersgill had retold the story that old oystermen in Perth Amboy used to say that Dr. Andrews sailed a balloon as they did an oyster sloop.[45] The inventor's own description of the *Aereon's* rudder seems to bear out the idea:

> The rudder is a triangular sail of muslin, of an original construction. It is attached like a sloop's jib to a rope or stay, and extends from the rear of the aerostat to the rear of the basket. From the bottom of the rudder depends a boom 8′ long to keep it extended, and to counteract the tendency of the wind to double it up against the aerostat. The rudder is worked by tiller ropes that run through various pulleys from the rear of the aerostat and from both sides of the rudder, into the car where they are manageable at will and where the aeronaut can steer his vessel as if it were a ship's gig, without changing his position in the basket.[46]

Just as it had in 1848, and again in 1863, the problem of making the gas envelope leak-proof continued to harass Solomon Andrews. He even advertised for help from other inventors.

> $500 Reward
>
> *To Inventors*: The above reward will be paid by the Aerial Navigation Company for a Balloon Varnish which will permanently retain gas under a pressure of 2 pounds to the square inch of surface. It must prevent osmosis; must be somewhat elastic, and not injure the fabric to which it is applied.
>
> Samples may be left with Solomon Andrews, No. 11 Walker Street, N.Y., with the varnish applied to silk, linen, or cotton cloth; made into any form, to contain at least 1 cubic foot of gas in order to test it.
>
> C. M. Plumb, Secretary.[47]

[44]Aerial Navigation Company certificate of incorporation, Institute of Aeronautical Science.

[45]Pickersgill, *op. cit.*, p. 41.

[46]Solomon Andrews, *The Aereon or Flying Ship* (N.Y., 1866), p. 14.

[47]*Ibid.*, p. 15.

Up until this model Dr. Andrews had controlled his ships just as other balloons were managed, that is by throwing out ballast to ascend, and discharging gas to descend. But with the *Aereon* he intended to try an experiment of contracting and expanding the volume of the gas bag by means of cords and pulleys. He figured that if the top and bottom could be drawn together and the aerostat flattened, its capacity would be diminished. "Thus, by means of the tackle, the aerostat may be permitted to enlarge as it ascends, and contract as it descends." First, however, it was necessary to find a material sufficiently strong to allow the gas to be compressed within it.[48]

A reporter from the *Herald* went on to explain Solomon Andrews' theories of aerodynamics in greater detail:

In a vacant lot at the Southeast corner of Greene and Houston Streets, in this city, there is now on exhibit an apparatus which may be the germ of the most important material revolution of modern times, equal in its effects on the progress of the human race to the invention of the steam engine and perhaps exceeding that of the magnetic telegraph. The apparatus is called the *Aereon* or "Flying Ship" and is designed to navigate the air . . . not merely to rise into and float in it, like a balloon at the mercy of every current, but to travel through it from place to place in any desired direction and at any wished-for rate of speed . . . with the wind or against it, as the case may be. The inventor, Dr. Solomon Andrews, has devoted the greater part of his life . . . more than 40 years . . . to the development and practical application of the principle which he believes he has discovered, the principle on which Dr. Andrews bases his plan of aerial navigation is the universal one on which the greater part of all motion in the universe depends, that of gravity.

His idea is, that the attraction of gravitation furnishes a sufficient motor for aerial navigation. In other words the difference of specific gravity between the balloon and the atmosphere in which it floats may be applied as a power to propel the balloon in any desired direction. Everybody has observed, but comparatively few have reflected upon the fact that a solid body moving through fluid has a tendency to travel in the direction of the line of least resistance. A spherical balloon, lighter than its own bulk of the atmosphere, will ascend perpendicularly through it, or if the air be moving horizontally, the balloon will travel in the same direction while rising. But if the balloon be elongated and kept in an inclining position to the horizon, so as to present a greater resistance to a vertical than to an oblique motion, then it will ascend or descend in a line of least resistance, that is the line of the longest axis. A simple illustration of this

[48] *Ibid.*, p. 12.

tendency is obtained by dropping a half sheet of paper at an angle of 40-60° with the surface of the earth. Instead of falling perpendicularly it sails off in the line of its least resistance. The sailing of a swallow on the wing, or the flight of a flying squirrel, are familiar illustrations of the same principle. If two cylindroids are placed horizontally side by side, there is formed between them a longitudinal cavity above and below. This concave surface offers more resistance to motion in air than a convex or plane surface, consequently rapid perpendicular ascent or descent is prevented and the power of rising or sinking perpendicularly converted into a force to move the balloon obliquely upward or downward in the direction in which it will move the most easily; the cylindroids slide, so to speak, on an atmospheric track, formed of air partially compressing in this longitudinal cavity. Here we have the whole principle on which depends Dr. Andrews' Art of Flying.[49]

The car and some other equipment had been saved from the 1863 balloon before it was set adrift. At an auction of army surplus material Dr. Andrews purchased four balloons, two of which, the *Union* and the *Intrepid* were cut apart to provide pongee silk for the *Aereon*. The segments were sewn so as to form a long balloon somewhat in the shape of a lemon with sharply pointed ends. A net covered the whole and straps and cords were rigged to carry out Andrews' theories of gaining or losing altitude by means of compressing the aerostat. A small rudder, described earlier, was attached to the rear and a basket of ballast could be moved on rollers.[50]

About nine o'clock in the morning on May 25, 1866, Dr. Andrews started filling the balloon with gas and by four in the afternoon he considered the machine ready and the weather favorable for the trial trip. Three officers of the Aerial Navigation Company went aloft with Dr. Andrews. They were George Trow, C. M. Plumb and G. Waldo Hill. The yard containing the balloon was rather small and was surrounded by a high fence as well as by tall houses and chimneys. Surpassing all these obstacles, the *Aereon* made a good ascent until her rudder ropes became entangled with the rigging. A southwest wind was blowing and the balloon drifted for a brief while until the voyagers regained control of the rudder. They turned her north and

[49]New York *Herald*, May or June 1866, scrapbook, Institute of Aeronautical Science.
[50]Scrapbook clippings.
[51]*Ibid.*

east and passed rapidly out of sight over the East River.[51] A reporter from the *Herald,* who seemed inclined toward rhapsodic prose, described the descent:

> After being *supra nimbos* for about 25 minutes the docile and beautiful steam-winged bird was successfully persuaded to pay a terrestrial visit to Astoria where both her highness and her privileged masculine convoy were received with surprise and welcome acclamations by the astonished denizens, and whence, gathering in her plumage, the Queen of the Air allowed herself to be borne in a plebian cart to her resting place in the metropolis . . .[52]

Another reporter from the same paper recounted the changes that would be necessary before another flight:

> . . . Finally descended in Ravenswood's wood near Astoria. In order to further increase the efficiency of the vessel, a further weight of the rudder was determined on, in order to counteract wholly the tendency of the currents to tap it up, which was slightly but hinderingly the case on Friday. It is also in design to lengthen the car . . . in order to throw the center of gravity further rearward, to make the angle of flight acuter and the results faster.[52]

But repairs and changes were expensive and the Aerial Navigation Company was already involved in financial difficulties. Apparently a trial trip had been planned for early May for the minutes for May 4 reported that the *Aereon* was in the enclosure and partly inflated and "Owing to the failure of the bankers this amount could not at present be rendered available." The treasury advanced the money and on motion of Dr. Andrews it was voted that the treasurer be refunded out of the first earnings of the company. In the post-war panic, banks were failing and money was hard to get. At a special meeting on the grounds of the company on May 18 a total indebtedness of $3119.74 was announced and an assessment of fifty per cent levied against the stockholders.[53]

Later records seem to indicate that they had great difficulty collecting these assessments, but somehow money was raised for the trip of June 5, 1866, described at the beginning of the article. An earlier paragraph in the *Times* article said, "The ship went in a northerly direction, then southerly, then northerly again, her

[52] *Ibid.*

[53] Aerial Navigation Company minute book, p. 97.

streamers showing that she was sailing against the wind. When last seen the *Aereon* was over Blackwell's Island and appeared to be under perfect control."[54]

It moved [reported a New York *Post* account] before the wind in the direction of Canal Street. The balloon kept her course before the wind, the aeronauts throwing out sand, which being very dry could be seen in little clouds. Handbills were also thrown out and these moved in the wind also with the balloon which turned around horizontally several times. It came down at Oyster Bay 2 hours after leaving the city.[54]

Cards had been dropped also during the flight of May 25th and one of these may be seen in a scrapbook at the Institute of Aeronautical Science on East 64th Street. It is interesting because it embodies Solomon Andrews' dream on a small square of pasteboard. There is a sketch of the *Aereon* and "Souvenir of her trial trip from the car of Andrews' Flying Ship"; then—prophetically—*Tempus Fugit, Tempore Fugit Homo.*

The minute book of the Aerial Navigation Company indirectly indicates the end of Dr. Andrews' dream when it noted for July 17, 1866, "A list of those who had not paid their assessments." Then for July 24: " . . . reported that the secretary not able to collect any money upon the assessments." There were no more entries.

Records of St. Peter's Church in Perth Amboy give a few personal details on Solomon Andrews. They say he lived on the site of the old Central Hotel in a house that was moved back of the Grammar School on Broad Street. He also "owned the triangle property, corner of State and Smith Streets," and "built a whole row of cottages on State Street from the triangle to Fayette Street."

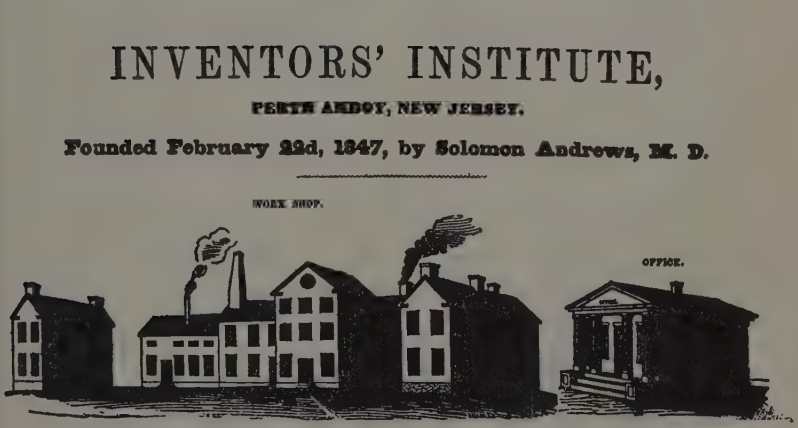
He had seven children, five of whom were girls. Roger B. Whitman, who has written two articles about his grandfather, was the son of Sarah Angelina, the third daughter.[55]

His obituary notice in the *Middlesex County Democrat* (Perth Amboy) for October 19, 1872, read:

We are called upon today to chronicle the death of Dr. Solomon Andrews of this city which occurred on Thursday evening last after a sick-

[54]New York *Times* and New York *Post,* June 6, 1866.
[55]Jones, *op. cit.,* p. 186.

ness of about 3 weeks duration. The doctor had held many positions of honor and trust in this city, having thrice been Mayor, a frequently member of the City Council. He was Health Officer of the Port at the time of his death and had in many walks of life distinguished himself.



An advertisement from *Kirkbride's New Jersey Business Directory . . . for 1850 & 1851* (Trenton, 1850). "This is a brick building in the form of a hollow square. It was built in 1757 for barracks, and was occupied during the revolutionary war by the British soldiers. That part of the building adjoining the engine house has been torn down, but will be rebuilt." The seven buildings shown are described, left to right: (1) west wing, part of keg factory; (2) engine house; (3) keg factory; (4) machine shop; (5) U.S. mail padlock factory; (6) east wing, "divided into eight distinct apartments for private workshops of inventors"; (7) office, 16 by 36 feet.

Hunterdon County in the First World War

HUBERT G. SCHMIDT

Dr. Schmidt continues below the story of Hunterdon County during World War I. The first part of the article, which appeared in the April PROCEEDINGS, *gave a picture of the county prior to U.S. entry into the war. A description of wartime activities, which was begun in that issue, is continued here, together with an account of the economic effects of the war. The final portion of the article, concerned with social effects, will be given in the October* PROCEEDINGS.

DURING previous wars there had been opportunities for young men to demonstrate their military ardor without necessarily leaving home. As war approached in 1917, a desire for similar opportunities manifested itself. In fact, as previously mentioned, several high school and Y.M.C.A. groups had already been practicing military exercises for some time. Once a state of hostilities was declared, the field was broadened. Mass meetings were held "for the purpose of forming organizations for home defense and military training." At Flemington, some three hundred citizens signed the roll as members of a Home Defense League, and drill was started at once. Lambertville began with a Home Guard of one hundred, Ringoes with seventy-five, and so on for other communities. The original enthusiasm soon faded, however, when no serious duties could be found for the organizations. The most dangerous job which appeared for the Flemington group was that of keeping the children quiet on band concert nights. The large membership in this place dwindled rapidly until it stood at thirty-two. Eventually, twenty-five of the men took examinations and became the Hunterdon County contingent of the new state National Guard unit which was organized to replace the old one, now in Army camp. As the danger of immediate invasion seemed over, other Home Guard groups disbanded, including the locally-famous Rifle Club at Whitehouse

which had been ably coached by an old Army man. Some Home Guard members doubtless benefited from their brief training later when they became "doughboys in Uncle Sam's army."

There were other manifestations of a desire to do something positive. The Hunterdon County Board of Agriculture attempted to organize community groups in parts of the county where there were no Granges, in order to have local organs for the dissemination of information. Flemington's mayor appointed committees of Home Defense and Military Training, Women's Service, Census, Finance, Secret Service and Publicity. Members of the Secret Service Committee were known only to the mayor, while the Publicity Committee was supposed to be "the only vehicle of communication to the public." Such superimposed organizations tended to dissolve as soon as the hysteria of the first weeks disappeared.

An obvious way of serving the nation was to increase food production. The farmers of the county, as elsewhere, had been rather discouraged by high labor and other costs, and there were indications that the acreage of food crops might be reduced. A newspaper campaign to prevent this was soon afoot. The *Republican* wrote: "A good farmer is a good defender of his country. There are only a few planting days left. Plant now! Plant as many acres as you can handle well." And of course the farmers were being bombarded by governmental and other outside propaganda. Rapidly soaring prices made larger operations look practical as well as patriotic. Special drives were made to get more persons, even in the towns, interested in keeping poultry, rabbits, swine, and bees. In March, 1918, the county superintendent of schools supervised the older schoolboys in giving help on the Hunterdon County end of a state agricultural census of crops, stock, and land utilization.

Shortage of farm labor caused a relaxing and reversal of school attendance rules. In the spring, high school boys might enroll in the Junior Industrial Army of New Jersey, quit school without loss of credit, and go to work on farms at from fifteen dollars to thirty dollars per month and board. Each boy signed a statement, "On my honor I will do my best to devote myself to the service of my state and my country by aiding the present

crisis. First, by cultivating, harvesting, and marketing crops on the farm. Second, by influencing others to do the same. Third, by keeping myself physically strong and mentally alert in the performance of this obligation." Each recruit for such work was given a service badge to wear. The idea proved very popular with the boys, many of whom could go to work on their fathers' farms. At the Flemington High School, twenty-five boys joined up at once, to the detriment of the school baseball team and the newly-formed Cadet Corps. The same plan was used in all of the high schools both in 1917 and 1918.

When vacation time arrived, there was a concerted effort to get the village lads out on the farms. Whether because of the lure of high wages or for patriotic reasons, many of them seem to have gone for at least the harvest season. The need for farm hands was one of the reasons for passage of the New Jersey "loafer law." This required the registration of all men between the ages of eighteen and fifty not "regularly engaged in some useful, lawful, and recognized business, profession, occupation, or employment necessary and essential to the protection and welfare of the United States." Sheriffs and municipal officers were to enroll such persons, who would then be "assigned" jobs. There is no evidence that the law was enforced in Hunterdon County, although it may have scared a few men into working at jobs for which they were not particularly fitted. It did not affect the typical village loafers to any noticeable extent.

The last week of April, 1917, was designated "Planting Week" in New Jersey. The Governor's appeal for larger gardens and intensive farming was read in every classroom, and children were urged to have individual gardens. Community efforts were made to provide space for new gardens, and prizes were offered for the best ones. Some garden seeds were distributed free by the United States Department of Agriculture in every school and community. Both patriotism and practical considerations led to the enlarging of gardening operations by many families. A special plea was, "Be a Potato Patriot," and the Lehigh Valley Railroad put on a "Potato Special," a car fitted out to demonstrate potato-growing and placed on exhibit at various points along the route.

During the spring of 1918 an even greater effort was made to encourage food production. The villager who dug up a fine lawn to make room for a garden was sure to be hailed as a "back-yard patriot." The schools put on a program like that of the previous year, and every Boy Scout was asked to "feed a soldier." The Milford National Bank offered prizes for the best school gardens in the county, and other prizes were offered on a local basis. It is doubtful whether the new gardeners added greatly to food production, but the expanded operations of experienced gardeners, like that of other food producers, undoubtedly did.

During the war period, the old slang phrase "Can it!" acquired new significance. Canning and drying demonstrations were given by representatives of the New Jersey College of Agriculture, and government pamphlets were distributed by libraries and other organizations. With growing regimentation, there came a disquieting rumor that surplus canned goods would be seized, a rumor which was promptly denied. The 1918 campaign to encourage food preservation was even more pressing than that of 1917. A Clinton editor stirred up wrath when he facetiously asked, "What are our idle girls going to do all winter besides eat the canned fruit their mothers have been industriously putting away?"

Something which affected everyone was the nation-wide drive for food conservation. Its earliest manifestation was the encouraging of the use of wheat substitutes, which began in May, 1917. In September, local editors began urging their meat-eating readers to take the edge off their appetites with cheese souffle, rice, corn pudding, bean custard, banana fritters, and "eggs in ambush." "War recipes" were soon the order of the day, and the observation of meatless, wheatless, and butterless days became tests of patriotism. A special drive for food conservation was made between October 28 and November 4. At Thanksgiving, the editor of the *Democrat* remarked that cranberry sauce without sugar was pretty sour. Porkless days and additional meatless and wheatless meals were soon added to the restrictions, much to the distress of housewives who tried to be patriotic. A cartoon in the *Democrat* showed a "house manager" determinedly marching in the ranks with the soldiers, helping

to "save democracy for the world." The *Democrat-Advertiser* portrayed a family meal, in which the father's long arm stretched across the Atlantic, his hand holding a plate with a luscious pork chop on it. A doughboy, labeled "U.S." was reaching for it, while another labeled "France" carelessly stuck his head above the trench to cheer.

By the early spring of 1918, government restrictions and regulations were affecting every mouthful of food. Restaurants must use "victory bread," which one editor classed among the horrors of war, and in addition must observe the weekly wheatless days. For a time, poultry dealers could not purchase or sell either live or slaughtered hens. Sales of many key commodities were definitely limited. Purchases of wheat products must be matched by purchases of corn or other substitutes. In July, "voluntary rationing" requests were sent out. During the period of a special drive to save sugar, pledge cards were sent to the regional headquarters for checking in order to prevent hoarding, a special dispensation being given those who were preserving food. The message that food would win the war, stated in a variety of ways, was dinned into the public ear, day in and day out.

Even more drastic was the drive for fuel conservation, particularly during the winter of 1917-18. At first the public was merely urged to be saving as to coal, and to use wood wherever possible, even in public buildings. The fact that there was a real shortage was made apparent by the lack of gas in Lambertville for twenty-four hours. Church services were curtailed in many places. For instance, the Dutch Reformed Church at Whitehouse Station cut out Sunday evening services during February. By this time, the voluntary phase was being replaced by one of tougher restrictions. In January, W. H. Fulper was appointed fuel administrator for the county, supported by an advisory committee of four, each member with his own area of supervision. Handbills were posted, and booklets, entitled *Regulations Applying to Hunterdon County,* were distributed. The steel under the velvet was soon felt. So-called fuelless Mondays came into vogue, resulting among other things in editorial apologies for papers' going to press late. Between January 18 and January 23, local factories obeyed the order to shut down completely. Local

residents, with coal bins running low, found it a little irritating when school children went about on "shovel tag days" distributing coal-saving tags. At times, war activities, as those of the Ringoes Red Cross, were restrained by lack of fuel. Already in March, the Administrator was given information concerning the rules for purchase of coal for the following winter during the summer. False statements as to coal needs were supposedly punishable by prison terms of two years and fines of five thousand dollars. In August, farmers with available wood supplies were warned that they would not be given allotments of coal. Fortunately for all, the Armistice brought an end of restrictions before winter really began.

Another restriction of the Fuel Administration was that on gasoline. "Gasless Sundays" began in September, 1918. According to one account, about half of the usual number of drivers, looking rather "sheepish," were out the first such Sunday. The National Guard patrolled the roads on the following Sunday, receiving "ludicrous answers" from drivers stopped by their road blocks. At Bodine's Corners, only thirty-five automobiles appeared during the day. This restriction on pleasure driving, except on the Sunday when the train-load of "war relics" was exhibited, lasted until the Armistice.

War patriotism, social pressure, and governmental regulations caused other sacrifices of various kinds. A real loss to the farmers resulted from the pegging of the price of wheat. A miller at Milford received the following terse note from the Food Administration, "We understand that you are paying $2.15 for your milling wheat. From the sample we have seen from your territory, it looks to us that you are paying more than Government price. $2.10 is about the right price for your best wheat. Please be governed accordingly."

Everyone was affected by the "daylight saving" of the summer of 1918, sometimes disparagingly called "daylight wasting" by farmers and others who disliked it. Flemington decided not to put Tarvia on its streets that summer in order to save coal products. The new Dural Rubber Company of the town found itself without a quota of raw rubber, and was forced to suspend the manufacture of inner tubes. The Lambertville Rubber Com-

pany voluntarily announced that it would give half pay to all employees who went into the Army, and the offer was made retroactive for the thirteen men who had already gone. A community sacrifice was shown at the 1917 Christmas entertainment at Whitehouse, put on by the "Cushetunk Colonists." The thirty-five dollars which would normally have been used to buy candy for the children was divided as follows: twenty-five dollars to the local Red Cross unit and ten dollars for Armenian relief. People were urged to give the money ordinarily spent on flowers at funerals for relief of the "starving Belgians and Armenians."

The spirit with which people accepted war sacrifices and made war efforts is shown by the enthusiastic response to the drive for the saving of peach, plum, cherry, and apricot seeds for use in the manufacture of gas masks. The collecting and hauling to a state depot in Trenton was done by volunteer workers. Calculations made a few days before the Armistice showed that Hunterdon County had contributed 115 bushels of these seeds, enough at two quarts per mask to provide carbon for 1840 masks.

IV. Economic Repercussions

At a meeting of the Executive Committee of the Hunterdon County Board of Agriculture in 1939, there was a discussion of the economics of the period of the First World War. Though most of the group took part in the conversation, the observations of only eight of them, all prominent farmers during the war, will be given here:

William Lauderdale, West Amwell Township: "I remember that I paid five dollars per day for farm hands during the war."

Wallace Suydam, Quakertown: "I didn't. I was able to get men for three dollars right along."

Clifford Snyder, Pittstown: "So was I."

Fred H. Totten, Ringoes: "It depended on the season. I paid five dollars for harvest hands in 1918."

Lauderdale: "We all remember 1918 as the year when we paid high prices for labor to raise and harvest our crops, then had prices go way down."

Charles Bird, Pittstown: "At the Frenchtown Horse Market before the war, seventy to one hundred dollars was considered

a good price for a horse. During the war, you couldn't buy a good horse for twice that."

Snyder: "Since everything was horse-drawn, the war created a real shortage. So horse prices went way up. Cow prices had been rising for years before the war, but didn't rise much during the war."

Totten: "I paid $112 for a good cow in 1911."

Theodore Dilts, Three Bridges: "Good cows ran about one hundred dollars before the war."

Lauderdale: "The war didn't bring up cow prices so very much."

Totten: "Milk prices didn't come up to correspond with other inflated prices until after the war was over. Then cows went up to 200 and 250 dollars."

Snyder: "Feed prices were so high that dairying didn't pay very well. Labor being so high was an element, too."

Totten: "I hauled some hay to Three Bridges and got thirty-five dollars a ton. I saved the receipt."

Lauderdale: "I beat you. I got $42 for some. The buyer said, 'Oh, we can get cars all right to ship hay for government mules.' "

Suydam: "Eggs were sky high, too. I got $1.04½ per dozen from an insurance company for three crates which got broken. They growled, but they paid it."

Max Trieber, Frenchtown: "My best price was $1.12 from a commission man in New York."

Suydam: "But with feed prices so high, there wasn't as much profit as before 1914."

Richard Schomp, Stanton: "We may have raised a little more wheat here, but the low government price discouraged much of that."

Snyder: "Wheat was bringing over three dollars per bushel before the government stepped in."

Totten: "Rye brought more than wheat. There was quite a bit of rye raised."

Lauderdale: "The war didn't change our farm practices so very much, nothing like it did in the Middle West. And the war didn't make farming so very profitable or bring up farm valua-

tions very much. In fact, not much land changed hands. It was too hard to sell, so we just hung on."

Suydam: "It was a period when it was difficult to get labor and when feed costs were too high for much profit."

Snyder: "Some farmers were quitting their farms and going to the cities to work."

Lauderdale: "No one wanted to farm. We couldn't even get tenants."

Schomp: "And when we did, they weren't much good."

Snyder: "I'll say they weren't."

The above observations give a retrospective view of the war period as a whole. However, it seems that the coming of the war in Europe in 1914 may have headed off a recession and have brought prices out of a slump. Relatively high prices for wheat and some other farm products were directly attributable to the war. In September, 1916, a grain dealer at Three Bridges reported that the farmers with whom he dealt felt "more prosperous than in years." But the growing of wheat was not of great importance in most of Hunterdon County, with its emphasis on dairying and poultry raising. The inflation of the period before our entrance into the war brought apparent benefits by increasing the prices of farm products which were sold. But, more and more, increases in gross income were matched by rising costs. Consequently, most farmers were in some doubt as to where they stood during this time, and many of them felt that they were dispensing money as fast with one hand as they gathered it in with the other.

The decline in optimism was especially noticeable after the summer of 1916, with its somewhat short crops. In February, 1917, the *Democrat* wrote,

> Many farmers are selling out this spring. We have been quite busy printing posters for vendues and sales. With the prices of everything the farmer raises sky high, it would seem as if everyone would stick at it and many others engage in farming. There must be a good reason for every sale, however, and one we believe is a scarcity of good, reliable help on the farm.

In fact, farm labor was not only scarce, but relatively costly. The accounts of a West Amwell Township farmer in 1912 show that summer-time hands were paid from $1.00 to $1.50 for a ten-hour

day. At corn-husking time, he paid $1.00 for a shorter day. A Raritan Township farmer in 1911 paid a man $25 per month plus house and garden for year-round work. In 1916 he paid $35, and at silo-filling time hired extra hands at $3.00 per day.

Other costs of production had also spurted upward. Poultry feeds were so high in price that a Pittstown dealer apologized in his advertising. Dairymen were organizing into branches of the Dairymen's League in protest against their unfair position. In the fall of 1916, mass meetings at New Germantown (Oldwick), Whitehouse, Pottersville, Clover Hill, and elsewhere threatened milk strikes unless prices set by the League were paid. Many farmers felt that the rise in meat prices was not enough to match added costs. The West Amwell farmer mentioned above averaged eighteen dollars apiece for veal calves in the latter half of 1914, about twenty-one dollars each during the same period of 1915, and twenty-four dollars in 1916. Nevertheless, he felt that his costs had increased out of proportion to returns.

In a letter to the editor of the *Democrat* in November, 1916, a Flemington man attempted to analyze the situation: "The matter of your winter supply of feeding stuffs is liable to become a serious subject as to cost. Wheat, corn, barley, rye, and buckwheat are fast reaching a prohibitive price as stock feeds." In predicting that the seeming prosperity of the country would crash sooner or later, he interjected a note of perspicacity unusual to the time and place: "No people can reap such a harvest as this country of ours, derived solely from the slaughter of human beings, and hope for its lasting benefit. We must pay."

Many farmers had planned to curtail their operations in 1917. Once we entered the war, however, response to patriotic propaganda and hopes of higher produce prices pushed up production. Evidence of the generally more hopeful atmosphere is shown in the increased newspaper space given to farming, an innovation kept up during the whole of the war period. For the moment, it seemed that now the farmer was to have his innings. A local columnist wrote:

> There was a young lady from Ringoes,
> Who suffered from corns on her big toes,
> And she said with a sigh,

"Now with corn so high,
I'll sell them and buy me some new hose."

However, it was soon evident that the introduction of new price levels would not change the situation to the farmer's benefit.

One of the first disappointments was the relative lowness of the wheat price set by the government. Hunterdon County was not primarily a wheat region, but enough wheat was grown as a nurse crop for grasses for the price to make a real difference. The pegging of the price stopped a breakneck rise in the market, as was its intent, but gave no incentive to expand wheat acreage. In April, 1918, a Hunterdon County business man, in a letter to the editor of the New York *Sun,* purported to speak for the seven or eight hundred farmers with whom he did business. He protested that farmers were paying up to eight dollars per day for harvest labor and "extortionate" prices for fertilizer, seed, and machinery, and in the end received a price for grain which was grossly unfair. He said, "We have been given nothing but hysteria from one end of Mr. Hoover's so-called administration to date." One farmer who received $2.30 per bushel for his wheat was quite unhappy when he had to pay $6.15 per hundredweight for flour.

There were some bright spots in the picture. The prices of other grains, which were not pegged, rose considerably. Farmers with surplus hay were able to command a good price. The same grade of timothy which brought eighteen dollars per ton in 1913 brought forty-two dollars in 1918. But since it takes two years to get a hay crop, there was no great rush to increase acreage of grass seeding. In fact, there is no evidence of any remarkable changes in the rather settled farm practices in Hunterdon County. The sweet was accepted along with the bitter, but there was no rush to change production.

At first glance, it would seem that the farmers were in an unusually happy position in regard to draft animals. European agents were buying every available good horse at very satisfactory prices. A single shipment of horses bought for the French War Department numbered sixteen hundred, many of them from Hunterdon and Somerset counties. To fill the vacuum which was created, stock dealers were busily employed in bringing

horses and mules from the Middle West, and Hunterdon had its quota of public auctions of such animals. In early March, 1916, twenty-two "Western" (i.e., Iowa) horses were sold at Three Bridges at an average price of $240.54. In late October, five hundred persons gathered at the Flemington fairgrounds to witness the sale of thirty-eight Kentucky mules. Within seventy-two minutes, all of them had been disposed of to fifteen different buyers. Some of the sales were to dealers, and it is probable that part of the animals were bought by Allied buyers. In mid-January, 1917, horses at Three Bridges averaged $240.07 and, a little later, $241.16. In late January, thirty-eight "Western" horses were sold at the opening sale of the Frenchtown horse market. Single horses averaged $254.36 and teams $538.20. In March, the average price per animal was $255.64. Prices rose only slowly during the next year. In February, 1918, average prices at one sale were $256.10, and at another, a little later, the price was $266.40.

That the importation of Corn Belt horses was no new thing is attested by an advertisement in which a Frenchtown dealer stated that the horses to be sold were "of the same grade and quality that have been sold in the market for the last thirty years." But the acceleration of the movement and the rapid rise in prices were reflections of the war in Europe. For the average farmer of Hunterdon County, it is doubtful that the trend brought much if any profit. Surplus animals, when there were any, were probably sold early, and farmers needing horses had to pay higher and higher prices. The occasional farmer who raised more colts than were needed for replacements on his farm and the even rarer one who bought "Western" horses and acclimatized them and got them into shape before sale to foreign and Army buyers probably made some profits during the war. What happened to such individuals when they were hit by the postwar slump in prices is another story. In any case, it seems that the average farmer kept no more horses than necessary. The coming of the automobile was releasing some horses, and it is probable that the great interest in tractor demonstrations at the Flemington Fair reflected the high price of horseflesh.

Cattle prices did not receive the same artificial stimulation

from the war. In early 1917, the High Bridge *Gazette* reported cattle prices at auctions in the nearby countryside as ranging from $85 to $125 per animal—very slightly, if any, higher than in 1914. In August, 1917, at an auction at Three Bridges, nineteen cows imported from New York brought an average price of $106. One farmer's accounts of 1918-19 show sales of cows at from $100 to $125. Other farmers agree that while dairy cattle prices reflected to a slight degree the rise in general price levels as well as higher beef prices they did not accelerate greatly until 1919, when retail milk prices broke through the barrier of consumer resistance.

The dairy farmer, with prices set for months in advance by organized dealers, ran into real difficulties in a time of rising costs. Before our entry into the war, the farmers of the New York milkshed had organized under the banner of the Dairymen's League and had carried on a successful strike. Prices thereafter were the result of negotiations and compromises between League representatives and the dealers. This does not mean that all was well, for costs were still climbing faster than fluid milk prices. A typical news item in Hunterdon County was one from Ringoes for June 13, 1917: "A meeting was held in the milk station to talk about demanding a higher price for milk." During the following September, the local League officials warned the farmers of Hunterdon of the dangers in a situation in which the dealers, although posting League prices, had not recognized the organization as a bargaining agent. Later in the year, the United States Food Administration, to avoid a strike during war time, asked that prices be kept at the present level for another month in order to give time for a governmental investigation. Soon thereafter, the Federal Milk Commission took charge and dairy farmers found themselves at the same disadvantage as was the case with the wheat farmers. There were complaints that the dealers, rather than the representatives of the farmers, had the ear of the Commission.

A strong factor was the general consumer resistance to increases in milk prices. During nearly all of the period, retail milk prices lagged behind those of other foodstuffs. Prices in

the villages of the county also tended to lag behind those of New York City, finally rising to twelve cents per quart in Clinton and to fourteen cents in Flemington in October, 1918. Butter producers of the county, of whom there were quite a few, were helped by the somewhat faster rise in prices of other dairy products than those of fluid milk, but they too felt the pinch. One by-product of all dairy farms, the veal calves, did bring better prices, and there was a tendency to keep them on the farm longer before sale. One farmer's accounts show veal calves averaging twenty-four dollars each during the last six months of 1916, thirty dollars for the same period in 1917, thirty-four for the first six months of 1918, and over forty for the second half of 1918. The increased income from this source was a minor matter, however. Dairy farmers kept going during this period because they were willing to accept little for their labor and because their non-dairy operations were remunerative enough to carry them through.

The growing of hogs seems to have brought fair returns, despite increasing costs. Factors entering into the situation were the European demand for pork, the generally higher standard of living of war prosperity days, and the effect of the great cattle losses in the West during and after the 1916 drought. At any rate, pork prices had risen rapidly. A Mountainville farmer selling three hogs for $108 calculated that he received $48 for his labor and profit. A Ringoes farmer in November, 1918, sold a litter of eight shoats born the previous March. Their total weight was 2114 pounds and the price twenty-three cents per pound. He calculated that he had made a nice profit on the venture.

Poultry farmers were undoubtedly better off than dairy farmers during this period, but were agreed that profits were not great. Their gross incomes were greatly augmented by the rapid rise in prices of poultry products, especially in 1918, but advancing feed prices apparently kept pace. Poultry, like cattle, require a considerable labor force, and costs from this source rose rapidly. In retrospect, it would seem that there were sizeable profits during the latter half of 1918, when local prices of eggs rose by leaps and bounds to over a dollar per dozen. It may be that

memory of profits during this time and for some months in 1919 has been tempered by the losses taken during the period of post-war deflation.

With the rise in the general level of prices, an acceleration in the price of land would normally be expected. Such a development apparently did not come in Hunterdon County. Not much land changed hands during the period, chiefly because of the not-too-happy state of agriculture. An informant, who knows something of the inside story of the purchase and resale of land in the Whitehouse area by a development company between 1912 and 1918, believes that the war did not have much effect on the venture. He himself bought an "alfalfa farm" of 130 acres in a good neighborhood for $5500 in 1917, a figure which should compare favorably with prewar prices. Real estate dealers later stated that farm land, as such, did not change much in price during the war period. If this is true, it gives additional evidence that war profits were not spectacular enough to entice buyers at increased prices. On the other hand, the collapse of 1920 apparently did not hurt agriculture in this area enough to bring down farm valuations.

Among all the other shocks of the wartime period, farmers still remember best their difficulties in regard to labor. Those farmers who enlarged their operations in 1917 did so with the belief that their sons and hired men would be exempted from the draft. When this proved not to be the case, some of them were in a bad way. The workers attracted to the farms by higher wages were often not very satisfactory. During the spring of 1917, it was a common saying locally that immigrant hands didn't know enough and that high school and college students who were hired knew too much. One farm hand who received a dollar per day for husking corn in 1912 was still paid only fifteen cents per hour or $1.50 per day for wheat harvest in 1915. But in 1916, his wage was twenty-five cents per hour or $2.50 per day for the same work, and $2.00 per day for other work. His wages in 1917 were not markedly higher, which probably explains the fact that his employer had to look elsewhere for a hand. He was paying his teen-age nephew $2.00 per day and board and avoided hiring anyone else until June, 1918, then

recorded his horror at having to pay $5.00 per day. Another farmer, who hired three full-time hands the year round, was forced in 1918 to raise the pay of each to $50 per month, in addition to furnishing them homes and gardens. His cash outlay for the three was exactly twice what it had been in 1911. By 1920, he would be paying $70 each. The word which still sticks in the minds of farmers of the period, as concerns labor costs, is "exorbitant."

Though Hunterdon County was in no sense an industrial region, it is of interest to note what the war did for manufacturing and for urban regions there. In 1916, Flemington was preparing for a minor industrial boom. A new Chamber of Commerce was very alert and active. In November the group imported a speaker, who held forth on the subject, "How we got new industries in Easton." The *Democrat* for a time printed regularly a plug which read: "Flemington, the old town beautiful on the South Branch of the Raritan River. A great opportunity for business, for homes, for investment. The Gateway to the best agricultural, dairy and fruit lands in the East. It is the answer to the 'Back to the Land Movement.' Three railroads, six churches, two schools." In January, 1916, the *Democrat-Advertiser* pointed out that during the previous two years in Flemington there had been built twenty-seven residences, one apartment and garage building, a $50,000 high school, an elevator crib, a municipal machinery shed, and a grandstand in the ball park.

The war boom brought the town a number of new industries. The Dural Rubber Company installed modern machinery, and soon, under the stimulus of French and American government contracts for rubber airplane accessories, had a force of men working night and day. A firm which manufactured polish for automobiles and furniture moved out from New York City. When the Flemington Cut Glass Company put up a new two-story building, the *Democrat* commented elatedly on Flemington's "slow, steady growth." The editor, forgetting that the war might come to an end, saw no reason why the town should not put twenty-five per cent more workers to working during the next two years. Lambertville, too, had its little war boom, and its citi-

zens had hopes of securing sizeable contracts for ship fittings and other war supplies but the Armistice brought war spending to an abrupt end before this could transpire. It is interesting to note, despite the furor, that the combined population of Flemington and Lambertville was one hundred less in 1920 than it had been in 1915.

High Bridge, with its two iron and steel plants, for a time seemed to have entered an era of expansion and prosperity. The Taylor-Wharton Iron and Steel Company, the largest single employer of the county, throve on contracts related directly or indirectly to the war. In early 1917 the company built a small addition to the village to accommodate additional workers and donated liberally to the local Y.M.C.A., the agency which had proved most effective in keeping in line the various elements of a heterogeneous population. The High Bridge Steel Company, a smaller firm, also did well during this period. The war demand for steel brought plans for reopening the old iron mines of West Portal and Swayze, but the scheme did not get past the paper stage. Plans for a silk factory to employ the potential female labor force of the village were killed by the ending of the war. Some neighboring villages also had visions of becoming industrial centers. A Connecticut firm, which needed space for the manufacture of uniforms, moved its silk-making machinery to Clinton, and set up operations there. In 1916, Hampton secured a plant for making water stills and filters. But these and other minor developments failed to change permanently the economic pattern of any of Hunterdon's villages.

The industrial boom here and elsewhere had an unsettling effect on labor, as already intimated. Shad-fishing, already in a decline, was nearly stopped as the fishermen were lured away by high factory wages. The same attraction caused a shortage of farm laborers and even of teachers in the schools. Household help became so scarce that pay levels for such service advanced to twenty-five dollars per month and keep by late 1917. Already in 1916, the Pennsylvania Railroad brought in Mexican laborers, who so disliked the rigor of the New Jersey winter that many deserted to return to sunny Mexico. The steel companies of High Bridge, their source of European labor cut off, brought in

West Indians and others. The murder of one Amber Allah by one Thomas Many brought into the newspapers some names which sounded strange in Hunterdon County. The shortage of labor led to other innovations. In 1917, the Taylor-Wharton Company hired women and girls as workers in its new core room. The Board of Freeholders put the inmates of the county jail to work on the county roads, and the state Road Department erected barracks at West Portal to house one hundred convicts who were to be used for work on state roads.

Demand for labor resulted in advancing wage levels. In March, 1917, the Lambertville Rubber Company gave a flat ten-per-cent wage increase. In February, 1918, Flemington building contractors, in order "to compete with the Government shipyards," raised the pay of carpenters, masons, and painters to four dollars for a nine-hour day. In April, the steel companies of High Bridge gave a fifteen-per-cent increase, and in July the Fulper pottery of Flemington gave one of twenty per cent. It is doubtful, however, if advances generally kept pace with increased living costs. A month after the Armistice, the High Bridge *Gazette* announced that the labor situation was "easing up" and that a railroad contractor had as many applications as jobs.

One mark of wartime activities was the increase in freight shipments on the railroads. In October, 1915, the New Jersey Central office at Flemington announced that during the previous nine months it had had the greatest increase in freight received and forwarded on record. After our entry into the war and the federal government's taking-over of the railroads, the pressure on facilities was so great that Sunday excursions and other passenger-drawing devices were discontinued. The embargo on shipment of certain types of materials brought hardship to some local industries. For example, the stoppage of lumber shipments from the South brought to a halt the manufacture of baskets and crates, which in turn created a shortage of containers for Hunterdon County tomatoes and other fruits and vegetables. A twenty-five-per-cent increase in freight rates in June, 1918, along with an increase in passenger rates to three cents per mile, did nothing to decrease the demands on the railroads.

One indirect result of the war was the loss of railroad facilities

for a part of Hunterdon County. The New Jersey and Pennsylvania Railroad, usually known as the Rockaway Valley Railroad, was a local road serving the northeastern part of the county, as well as parts of Morris County. In June, 1917, plans were afoot for rather extensive repairs, when the owner received a tempting offer to sell the road and its equipment as scrap. A year later, the railroad was in process of demolition. News accounts stated that the owner, receiving twice as much for the rails as when new and three times as much for the ties, was able to double his investment, even though the right of way reverted to the farms from which it had originally been carved. Potterstown and New Germantown (Oldwick) were left without railroad connections.

A number of other economic effects seem worth the recording. Hunterdon County was affected when the Public Utility Commission allowed the New Jersey Gas Company to raise its rates, when the United States fuel administrator allowed a boost in gasoline and oil prices, and when the Post Office Department raised its postage rates to three cents for letters and two cents for postcards. In January, 1918, the Red Cross complained that there had been an increase in the prices of the materials which it used of from fifty to seventy-five per cent during recent months. With yarn costing $2.50 per pound and unbleached muslin eighteen cents per yard, local auxiliaries were embarrassed that their funds were inadequate for potential operations. Shortages of various kinds also had an effect on every side. For example, the fact that the government had commandeered all canvas made it impossible for the Flemington Fair to put up new tents for exhibits in 1917.

Grocery prices were the subject of constant complaint. In December, 1916, the Flemington Housewives' League asked for general observance of a consumer's strike in protest against the high price of eggs, and in February, 1917, the *Republican* endorsed a buyer's strike as to potatoes, which were so expensive that many grocers refused to handle them. After our entry into the war, retail prices climbed steadily upward. Between November, 1916, and the spring of 1918, the price of pork chops in Flemington rose from 22 cents to 34 cents per pound. As early

as September, 1917, a church group postponed its annual turkey supper because of the "extremely high cost of foodstuffs." Butter was so high that "nut margarine" appeared on the market as a competitor in late 1917 at thirty-two cents per pound. Toward the end of the war, food prices soared even faster, but people by this time seemed to take in their stride the new increases.

One regrettable result of war demands was the cutting off of some of the finest timber of the county. Government contracts for wooden ships, combined with other building, brought prices for certain types of lumber to what seemed fantastic levels. As a consequence, the sawmills of the northern part of the county were very busy. A fine forest west of Clinton, partly tulip poplars of huge size and partly white oak, said to be virgin timber, was felled. The owners, who for three generations had refused to sell, were apparently persuaded as much by patriotism as by the high price offered them. The poplar was in demand for airplane manufacture, and the oak for the stems, keel shoes, rudders, rudder posts, etc., of the government's jerry-built pine ships. Large logs, thirty-four feet in length, and weighing several tons each, were soon moving toward the sawmills of Glen Gardner and Pattenburg. The government inspector is reported to have said that they constituted the best shipbuilding stock which he had seen.

[*To be continued*]

ANTIQUER'S ATTIC

MARGARET E. WHITE

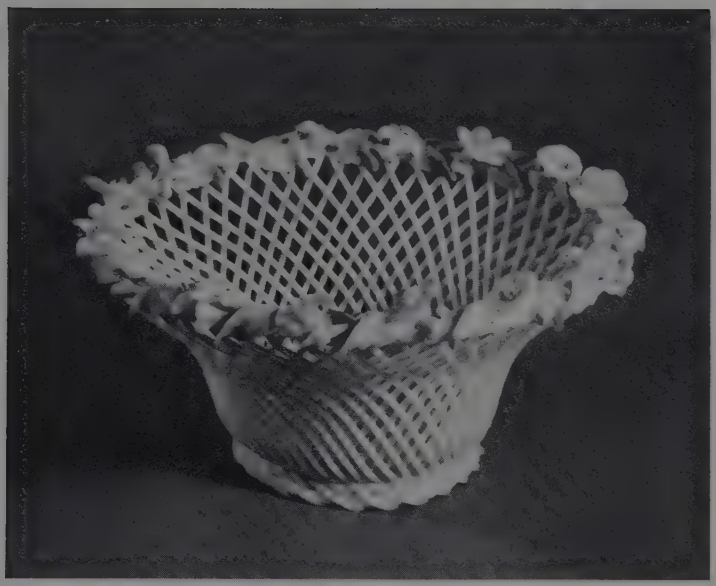
This department deals with New Jersey antiques and their makers. Miss White, who is curator of decorative arts on the Newark Museum staff, plans to cover various aspects of the subject in future articles. As with other departments, information and suggestions will be welcomed.

CERAMICS

New Jersey holds first place in the history of American ceramics for she has pioneered in practically every type of ceramic ware produced in these United States. Potters are recorded at least as early as 1685; others who were active at that time will never be known to us. Since the beginning of the eighteenth century, far too many potteries have been established in various parts of the state for inclusion in this article. Their names and examples of their work are recorded in the catalogue of an exhibition "The Pottery and Porcelain of New Jersey, 1688-1900," held at the Newark Museum in 1947. Fortunately, a number of collectors in our state cherish examples of the early earthenware and stoneware utensils used in kitchen or dairy, as well as more sophisticated pieces of belleek and porcelain made by such firms as Ott & Brewer or the Willets Manufacturing Company of Trenton.

The first pottery works of importance recorded in New Jersey was established at Burlington in 1688 by Dr. Daniel Coxe of London. Dr. Coxe was no potter, nor did he ever come to America. He was court physician to Queen Catherine, consort of Charles II, and later of Queen Anne of England. He owned a vast tract of land in our state and was governor of West New Jersey from 1687 to 1692. In 1688 Dr. Coxe and two other gentlemen of London agreed to establish a pottery at Burlington for making "white and painted earthenware and pottery vessells." They engaged two potters from London and nearby Lambeth as manager and assistant at the Burlington works. These works were within a few blocks of the Delaware River and according to Dr. Coxe's own statement large quantities of his pottery were shipped from Burlington to the Barbadoes and Jamaica. No doubt the sailing vessels returned from the West Indies laden with sugar cane, molasses and rum.

The "pottery vessells" referred to were undoubtedly crude earthenware utensils for household use. As for the "white and painted earthenware," we can guess that these were from the types of earthenware produced in England in the 1680's. William Gill, assistant at the Burlington works, had come from Lambeth which was then producing some of the



Belleek porcelain basket, hand-made by James Shelton of Lenox, Inc., *c.* 1900. (Photograph courtesy of the Newark Museum.)

Pie plate with slip and sgraffito decoration, inscribed "Manufactured by Phillip Durell October 27th 1793"; the only known example of New Jersey sgraffito pottery. *Right*: Toby pitcher of stoneware made at Salamander Works, Woodbridge, *c.* 1850. (Newark Museum Photographs.)

Belleek porcelain basket, hand-made by James Shelton of Lenox, Inc., *c.* 1900. (Photograph courtesy of the Newark Museum.)

Pie plate with slip and sgraffito decoration, inscribed "Manufactured by Phillip Durell October 27th 1793"; the only known example of New Jersey sgraffito pottery. *Right*: Toby pitcher of stoneware made at Salamander Works, Woodbridge, *c.* 1850. (Newark Museum Photographs.)

finest examples of English delftware—the only kind of "white ware" made in England at that period. The Newark Museum has a fragment of a stove tile made at the Coxe pottery between 1688 and 1692. It is of coarse clay coated with a white tin-enameled glaze. Potters had not yet learned how to produce a white clay, similar to Oriental porcelain, so they coated natural-colored clay with a glaze made white with ashes of tin. This tile is the earliest piece of New Jersey pottery in the Museum's collection.

Each new settlement in the American Colonies was forced to develop its own crafts, such as weaving, pottery, carpentry, or cabinetmaking. Without question, the early Dutch and English settlements at Jersey City, Hoboken, "English neighborhood" in Bergen County, or the Swedish settlements in the southern part of our state, produced their own household wares, but we have no record of the potters. William Crews had a pottery in Burlington about 1685. Four years later, Crews moved to Philadelphia, perhaps because of the more ambitious pottery works established by Dr. Daniel Coxe.

Until the 1730's, coarse earthenware, or redware as it was called over here, was the only form of pottery made in the colonies. Then, the right clay having been located, potters began to make stoneware. The special blue clay used for American stoneware was found only on Staten Island and in the vicinity of South Amboy, New Jersey. This deposit may have extended under Raritan Bay. For many years the potters of New York and New England, as well as those of New Jersey, obtained their supplies of blue clay from this source.

The first stoneware produced in our state came from the village of Cheesequake, about two miles from South Amboy. James Morgan who operated a pottery there between 1775 and 1785 was evidently an officer in the Revolutionary War. Soon other stoneware potteries sprang up in Elizabethtown, Matawan, New Brunswick, Flemington. The Newark Museum owns two mugs made by James Morgan at Cheesequake, as well as a water cooler dated 1788 and made by Morgan's son, Charles, at the same pottery. Thomas Warne, son-in-law of James Morgan, also operated a pottery at Cheesequake. He was joined about 1805 by his own son-in-law, Joshua Letts. Both these men are represented in the Newark Museum's collection. Here, also, is a stoneware oyster bowl, dated May 27, 1805, and made by Josiah Van Schoick of Matawan. Evidently oysters were plentiful and good in this locality for Dr. Alexander Hamilton of Annapolis, Maryland, had earlier reported from Perth Amboy, "They have here the best oysters I have eat in America."

The Fulper pottery works was established at Flemington about 1805. A stoneware crock in the Museum's collection has the firm name G. W. Fulper & Bros. im-

pressed. It is decorated with a little blue bird, probably painted by John Kunsman.

Stoneware is very hard, durable, and impervious to liquids. Some stoneware has a smooth glaze, with a minutely pitted surface resembling the outer skin of an orange. Pieces were decorated with bands of impressed design made with a coogle or with flowers and birds painted in blue or brown enamel glaze. Stoneware cannot be confused with the porous earthenware used for pie and bacon platters, mugs, and other household utensils, until late in the nineteenth century. Many of these humble pieces were ornamented with slip and scratched—or sgraffito—designs traced in white, yellow, or even green liquid clays, known as slip. Only the more experienced craftsmen could do this slip decoration on pottery. The finer examples were considered quite worthy to serve as gifts at a wedding or christening.

One such craftsman was George Wolfkiel of Bergen County. We associate this type of pottery with the Pennsylvania Germans so it is not surprising to find that Wolfkiel came to Hackensack from Pennsylvania. He was active in Hackensack during the 1830's and 40's, his specialty being slipware pie plates and stoneware crocks. The Newark Museum has a number of pieces made by George Wolfkiel and presented by the Bergen County Historical Society in 1925. In the Steuben House at North Hackensack are some strikingly similar plates that might have been made by Wolfkiel. Unfortunately, the pieces are not labeled. Also at the Steuben House is a crock with orange-brown glaze thumb-splashed with black. It closely resembles a jar in the Museum's collection made by Balthasar Krumeick of Newark about 1845.

The production of ceramics in America found its greatest stimulus in the Revolutionary War. Before then, Great Britain and the Continent had been our chief sources of supply. Once the war was over and we were free, there was a tremendous burst of energy. The potters of New Jersey now built up a fine reputation. In 1829 David Henderson of Jersey City introduced an innovation that was to transform our small pottery workshop into factories, make mass production possible, and bring the price of a good piece of pottery within the range of the ordinary pocketbook. This new method, borrowed by Henderson from England, made it possible to cast clay in molds instead of using a potter's wheel. Casting in a mold not only speeded up production but also made possible the relief decoration that became so popular during the Victorian era. Henderson employed at the American Pottery Company in Jersey City men who had been trained at the great potteries of England. Among them was Daniel Greatbach, the best known of all ceramic modelers in our country. It was Henderson's pottery works that produced the first transfer-printed ware made in

America. This was around 1839-40 when Jersey City came out with the William Henry Harrison campaign pitcher bearing a portrait of Harrison, "The Ohio Farmer," together with the traditional log cabin and hard cider barrel. This historic piece was followed a few years later by a pitcher showing the landing of Lafayette at Castle Garden in 1824.

Among other outstanding potteries of the nineteenth century were the Salamander Works at Woodbridge; the Swan Hill Pottery at South Amboy; the Eagle Pottery at Perth Amboy. In Trenton were several well-known firms. Millington, Astbury & Poulson was established there in 1853. The Trenton Pottery Company was incorporated in 1865. The Etruria Pottery was established by Bloor, Ott and Booth in 1863, but two years later the firm name became Ott & Brewer. Until 1875 their output was largely graniteware and cream-colored ware. With the Philadelphia Centennial Exhibition in preparation, Ott & Brewer engaged Isaac Broome, an American sculptor, to design figures and busts in parian ware. The Newark Museum has a bust of General Ulysses S. Grant, designed by Broome, which was exhibited at the Centennial.

Before this, various attempts at making porcelain had been tried in New Jersey without success. In December of 1825 the Jersey Porcelain and Earthenware Company was established at Jersey City. The following October, 1826, the Company received a silver medal for the pieces they exhibited at the Franklin Institute in Philadelphia. Other attempts were made, later, at Gloucester and Trenton. However, real success was only achieved in 1882 when Ott & Brewer brought to this country William Bromley of Belleek, Ireland. Bromley had been instrumental in establishing a porcelain works at Belleek. Now, under Bromley's guidance, Ott & Brewer of Trenton produced the first belleek ware made in these United States. Belleek, by the way, is a very light and thin porcelain.

In 1889, Jonathan Coxon and Walter Lenox organized the Ceramic Art Company at Trenton. In 1896 this firm became Lenox Incorporated and is today the leading manufacturer of porcelain in this country. Many readers doubtless have visited the plant.

About 1900 the Fulper pottery works at Flemington began producing art wares and experimenting with different kinds of glazes, including a mottled or flambe glaze copied from Chinese pottery. This company has now moved to Trenton and operates under the name of Stangl.

Sometimes referred to as the $60,000,000 pottery industry, the ceramics of New Jersey have always set a notable example. Today, the greatest output is no longer in our own state but has shifted to New England, Ohio, and California. Therefore, good pieces formerly made in New Jersey may be expected to increase in historic value.

DIRECTOR'S DIARY

ALEXANDER J. WALL, JR.

Although the shot fired early in the morning of July 11, 1804, was not "heard 'round the world," it has echoed through the pages of American history for 150 years. It was on that date that Aaron Burr shot and killed Alexander Hamilton in a duel on the Jersey shore of the Hudson River at Weehawken. Reading the preliminary correspondence between Burr and Hamilton, and between William P. Van Ness and Nathaniel Pendleton, their seconds, is fascinating business. Burr, having been nominated for the governorship of New York, took violent exception to a passage in a letter from Dr. Charles D. Cooper to Philip Schuyler, appearing in the Albany *Register* to the effect that Cooper could detail a "still more despicable opinion which General Hamilton has expressed of Mr. Burr."

Burr presented this to Hamilton through Van Ness, demanding a prompt acknowledgment or denial or the utterance of any expressions which warranted Cooper's assertion. Hamilton responded that Cooper's phrase "more despicable" was entirely too vague, but that he stood ready to avow or disavow any precise or definite opinion which he might be charged with having declared. This did not satisfy Burr, and from here on through twelve letters between the principals and between their seconds one can sense the relentless manner in which Burr was closing in, and the evasive, weaving tactics of Hamilton, who was plainly anxious to avoid an encounter but unwilling to offer a denial, an avowal, or an apology. The library of the New-York Historical Society in New York City contains the correspondence pertaining to the Hamilton side of the episode, and the library of the New York State Historical Association at Cooperstown, N.Y., is the repository for the documents relating to the Burr side. For the convenience of those interested, the latter association printed in the October 1946 and January 1947 issues of *New York History*, "William Van Ness' Story" of the historic affair, together with the various documents which passed between Burr and Hamilton. The foregoing, I understand, was also issued as a separate publication by them.

To mark the anniversary of the duel, the New Jersey Historical Society is featuring as the exhibit of the month Gilbert Stuart's portrait of Aaron Burr. A copy of this fine portrait, owned by the Society, can be found opposite page 98 of the April PROCEEDINGS.

The fourth annual New Jersey

Historical Conference at Princeton on May 22 was by far the largest in point of attendance of any of the conferences to date. Three hundred and seventy were present for the sessions, the luncheon, and the tour co-sponsored this year by the Historical Society of Princeton. The morning program commenced at 10:30 A.M., with a lecture session and two concurrent workshops, all in the First Presbyterian Church. Under the chairmanship of Dr. Bruce H. French, president of the Historical Society of Princeton, the lecture session was begun by Dr. Hubert G. Schmidt, associate professor of history at the Newark Colleges of Rutgers, speaking on "Hunterdon County in World War I." He was followed by H. Jerome Cranmer, assistant professor of economics at Drew University, whose title was "The Transportation Lottery in New Jersey," and by Dr. Edward McNall Burns, chairman of political science at Rutgers University, who read a paper on Aaron Burr. Meanwhile, in a nearby conference room, "The Role of the Local Historical Society Library in the Study of History" was discussed by Miss Miriam V. Studley of the Public Library of Newark, and Audubon R. Davis of the New Jersey Historical Society, under the chairmanship of Dr. Henry L. Savage, archivist of Princeton University. In another conference room Mr. Joe K. Kindig III, lecturer and authority on antiques of York, Pennsylvania, gave an illustrated talk and conducted a forum on "Collecting Antiques," under the chairmanship of Mrs. Frederick Frelinghuysen.

After a satisfying luncheon at Nassau Tavern, guests assembled in Alexander Hall, made available by the authorities of Princeton University when the facilities of the church could no longer accommodate them. Dr. Richard P. McCormick, president of the New Jersey Historical Society, presided over the afternoon session. Dr. French spoke on "The Quaker Origins of the Town of Princeton," and Alfred H. Bill gave an address on "Morven, Home of Richard Stockton and Annis, His Wife."

Mrs. Harry A. Farr II spoke on the historical background of "Rockingham," following which eight buses transported the guests on a tour which included the Quaker meeting house; "Tusculum," home of John Witherspoon; "Rockingham," scene of Washington's farewell address to the army; and Nassau Hall, where Dr. Savage in a talk gave historical perspective to this ancient structure. The day closed with refreshments served in the faculty lounge of the Princeton University Library, where an exhibition pertaining to the Rittenhouse Orrery was shown.

The New Jersey Historical Society is greatly indebted to Dr. French and his associates of the Historical Society of Princeton for the co-operation and assistance rendered, all of which greatly contributed to a successful and enjoyable day.

On May 1 Mrs. Joseph W.

Greene, librarian of the New Jersey Historical Society, retired from active participation after twenty-five years of service. Appreciation for these many years of endeavor above and beyond the requirements of her position is best expressed in the words of Mr. Elmer T. Hutchinson at the April 14 meeting of the Board of Trustees, when he read the following:

"I should now like to express to you, both personally and for the Board, our indebtedness for your splendid co-operation, enthusiasm custodianship and meticulous care in everything you undertook—all of which are reflected in the high standards you have achieved in the operation of our library. You have been a part, yes, a vital part, of this organization for more than a quarter of a century, and throughout those long years you have enjoyed the respect and esteem of our trustees, your co-workers, members of the Society, and a host of visitors. Be assured, Mrs. Greene, that these words of felicitation are not perfunctory, but come directly from the heart."

We are happy to say that Mrs. Greene's retirement has in no way diminished her love or enthusiasm for the affairs of the Society and she is continuing work at the Society on many of the projects she became interested in when she was employed here. Mr. Audubon Davis, who came to the Society in February, is carrying on in Mrs. Greene's place.

The Woman's Branch of the Society, as announced in the April PROCEEDINGS, held its annual meeting on April 14. Mrs. Bond Powel, keeper of the American Wing of the Metropolitan Museum of Art, spoke, with illustrations, on "Earliest American Landscapes, 1720-1820." The Woman's Branch recently presented to the Society two specially-made female mannikins of small dimensions for displaying costumes from the Society's collections. Temporarily retired for the summer, the figures will be used again in our costume displays next fall.

During the past few months there has been a considerable demand for loan material from the Society for numerous temporary exhibits and for television. In addition to the Boudinot teapot, which was returned from the Newark Museum's "Introduction to Silver" loan exhibition in May, we have been happy to co-operate with and make available material from the Society's museum collections to the TV Research Council, Montclair State Teachers' College, the Kearny Museum and Historical Association, National Newark and Essex Banking Company, Koos Brothers of Rahway, Iverson Ford Associates (TV programs), Public Service Company, and the New Jersey State Museum at Trenton.

We are appreciative for the numerous gifts which continue to be offered to the Society by our membership and interested friends. Mr. and Mrs. Samuel Butterworth of Glen Ridge presented the Society with a variety of articles in use about 1875, including carriage

lamps, several types of sleigh bells, carpentry and cabinetmaker's tools, and several unusual drawer pulls of pressed glass, made by Deming Jarves of Massachusetts. From the Misses Elizabeth and Margaret Baldwin of New Brunswick we were the recipients of several unusual early nineteenth-century lamps, an umbrella cane, and other objects of interest. Four attractive portraits by Rembrandt Peale were received from the estate of Miss Ethel S. Carrington of East Orange. The subjects, all Newark people, are Dr. and Mrs. Jabez Goble and Mr. and Mrs. James M. Carrington. The estate of Mrs. Florence P. Eagleton of Newark presented the Society with a collection of historical volumes and a variety of objects in the field of decorative arts, including an upholstered chair made by John Jelliff, Newark cabinetmaker, a heavy gold column wall mirror, Alloway-town celery glass, a pair of silver candelabra, a flask of General John A. Sutter, and numerous association pieces.

Several special exhibits were installed during the spring, including "Exhibits of the Month" on Grover Cleveland during March, the showing of the Peale portrait of Dr. Jabez Goble in April, and some scenes of historic Princeton during May and June. In addition, upon the conclusion of the pewter exhibition lent by John H. McMurray, sixty fans from the Society's collection were placed on view for the summer months. This exhibition has proved to be a popular one with the ladies and the fans are as colorful as they are reminiscent of the days of corsets and breath-taking stays.

The summer season promises to be mercifully quiet, which gives us much-needed time to catch up on the "housework" of museum re-installation and library improvements, as well as the opportunity to clean the building, allow for staff vacations, and plan programs and events for the fall. Present plans indicate a talk on John Watson, New Jersey's first limner, by Theodore Bolton on Saturday, October 2, which will be combined with a special exhibition of the Watson miniature drawings presented to the Society last year by Mrs. Lucien B. Horton. It is also anticipated that we shall have, during October and November, a special exhibition of mementoes of American political campaigns, both early and recent.

THROUGHOUT THE STATE

An important historic document relating to New Jersey's early days as a colony was presented to Governor Robert B. Meyner by George Douglas Hofe, president of Carteret School, West Orange, in a ceremony at the State House, Trenton, on April 7. Arrangements for the presentation were made by Mrs. Olga G. Atkins, supervisor

of historic sites in the New Jersey Department of Conservation and Economic Development.

The document is the original royal appointment of James Smith to the Council of New Jersey in 1722. It bears the Royal seal and is signed by George I, first member of the House of Hanover to be king of England, and by John Carteret, Earl of Granville, secretary of state at that time.

Mr. Hofe's initial interest in the document was aroused by the Carteret connection, for the Carterets were the "proprietors" of New Jersey until 1702. This old association with New Jersey is commemorated in the name of Mr. Hofe's school at West Orange.

A little research by Mr. Hofe on James Smith showed that Smith's appointment and subsequent profitable career could be fairly well pieced together from various sources and from published collections of colonial documents in New Jersey and New York. However, the present document, the all-important royal apointment of Smith, seemed to be unknown and was unrecorded by Whitehead in his edition of *Documents Relating to the Colonial History of the State of New Jersey*. When Mr. Hofe saw that his document filled the gap in Whitehead's documentation and was perhaps the most important single piece in this fragment of colonial history, he decided that it properly belonged to the state of New Jersey and offered to present it to the state archives.

A group of history students from Carteret went to Trenton with Mr. Hofe and the presentation ceremony climaxed for them a day-long tour of historic sites in and around Trenton. The Carteret document is currently on display in the State Library and later may be exhibited in other parts of the state in connection with observances of significant dates in New Jersey's history.

At long last, Rahway has been given official recognition as the place where a mint in 1786 turned out the nation's first coins bearing the legend *E Pluribus Unum*, a motto now found inscribed on all metal currency in the United States.

The Rahway site was given official recognition with the printing of a paper prepared by Damon G. Douglas, second vice-president of the Society, in the PROCEEDINGS for July 1951, citing his conclusions in the matter and recommending that a marker be erected to give Rahway "its rightful recognition as the place where the first Jersey coppers were minted."

The state Department of Conservation and Economic Development approved the placing of the marker at the proper location on the south bank of the Rahway River on St. Georges Avenue, the site now occupied by the Koos Brothers furniture mart. Charles Koos, president of the firm, presented the plaque and allowed it to be placed on the property as his contribution to the long-delayed recognition.

Governor Robert B. Meyner and his mother, Mrs. Sophia Meyner, assisted at the unveiling cere-

monies on April 20. The marker, which is three-by-four feet, and on a support about seven feet high, bears the inscription: "First Mint Site. In Daniel Marsh's grist mill on this site, the first New Jersey 'Horse Head' Coppers were minted in 1786. They were the first authorized coin to bear the legend 'E Pluribus Unum.'"

After several years of intensive research, Mr. Douglas concluded that the Rahway mint, rather than Morristown or Elizabeth, deserved credit as the location where the initial Jersey coppers were made. The study revealed that the Rahway enterprise, operated by three men under a contract with the New Jersey Legislature, predated the Morristown mint by several months. The Elizabethtown coinage did not begin until two or three years later.

Mr. Douglas is vice-president of the American Numismatic Society and a former governor of the American Numismatic Association, past president of the New York Numismatic Club and the New Jersey Numismatic Society. Rahway-minted Jersey coppers were presented by Mr. Douglas to Governor Meyner, Mr. Koos, and Mrs. Atkins.

Good news was received from Burlington when the freeholders of that county voted to retain its historic county jail. It had been scheduled for demolition in a $1,500,000 building program to provide Burlington County with a new jail and more office space for county officials. The jail, located in Mount Holly, was constructed in 1810-11 from designs by Robert Mills, architect of the Washington Monument and two wings of Independence Hall, Philadelphia. Upon hearing of the proposed destruction of the building last February, there was a movement to preserve the building, in which the Burlington County Historical Society played a prominent role. The movement had the support of many people and such organizations as the local Daughters of the American Revolution and the National Trust for Historic Preservation in Washington, D.C. The freeholders voted on May 25 to save the structure.

The Burlington County Historical Society has also been active in other ventures. They have begun the issuance of a publication of historical notes and comments which should prove very valuable to them. At their annual meeting on May 5, Mrs. Hugh Pugh was elected president, succeeding Mrs. Lewis M. Parker. This was followed on June 26 by a pilgrimage in buses to Salem and Hancock's Bridge.

A number of other New Jersey organizations planned historical tours for the spring and summer seasons. An open house was held in Princeton on May 15 for the benefit of the scholarship funds of Mount Holyoke and Radcliffe colleges, when nine historical and modern homes in the area were visited. The Camden County Historical Society with the Gloucester City Historical Society made a tour on June 5 through the South Jersey Pine Barrens, a section of the state famous for its local lore and

Revolutionary tales. The Gloucester County Historical Society sponsored a Gloucester County Old Church Day on April 25 with a tour visiting fifteen religious structures of early date. On May 25 the Historical Society of Florham Park managed a tour of five houses of its area, and the Cape May County Art League has scheduled one for July 9. Of uncertain date are tours planned by the Cumberland County Historical Society and the Paramus Historical and Preservation Society.

The Paramus society also held its sixth annual exhibition on April 23, which included items of interest for all—archaeological material, old-fashioned garden flowers, a fashion display, genealogical material, and historical movies; and on May 19 at the annual meeting Jared Banta turned the chair over to Mrs. Rosa Livingston, the newly-elected president.

The Trenton Historical Society also has a new president. He is Dr. Roscoe L. West, president of the State Teachers College at Trenton, who succeeds Parvis Brearley. A late report from that society indicates that a program of outstanding interest was held at their annual meeting on February 19, when Dr. Henry Steele Commager of Columbia University gave an address on American foreign policy. The Bergen County Historical Society climaxed its year with an antique show and strawberry festival in June, and the Gloucester City society, in addition to its tour, held an annual exhibition of early views, books, papers, and china picture plates on May 27.

The Chatham Historical Society announces that the re-publication of Ambrose E. Vanderpoel's *History of Chatham* will be ready in the late fall. Sponsored by the Society, the work will be presented as a memorial to the late Merritt Lum Budd, a former member of the Society, himself an historian and well-known collector of Indian artifacts.

The Vanderpoel book, only five copies of which were produced in the original printing, is the only definitive history of Chatham and its environs in existence. Inquiries concerning copies of the proposed volume may be addressed to Miss Margaret Keisler, corresponding secretary, Chatham Historical Society, Chatham, N.J.

A pig of iron from the old Andover mine has been lent by the Sussex County Historical Society to the State Museum for display in a mining exhibit there. The iron pig, which has the name "Andover" stamped on the top, was a gift of the late Watson R. Ayers of Andover, an officer and active member of the Society during his lifetime. The Andover mine was operated from about 1725 until the second year of the Revolution by a company of English ironworkers, of which Allen & Turner of Philadelphia were the American representatives. The ore was taken to Waterloo near Stanhope in Sussex County where it was made into pigs at a forge and refinery of the English owners and shipped to England. Because of the need for iron during the Revolution, and as the owners were English interests,

the mine was taken over and operated by the colonists. Idle from 1800 to 1848, it was acquired by Peter Cooper and Abram S. Hewitt, who constructed a mule-railway to transport the ore to the Morris Canal at Waterloo, later chartering the Sussex Mine Railroad, now a part of the Lackawanna. The mine has not been in operation for many years but some of the workings are visible and some of the buildings converted to other uses are standing.

The Sussex County Historical Society has contributed $250 to help defray the loss sustained by Augustus Ohberg of Vernon Township, Sussex County, while steam shovels stood idle to continue a search by State Geologist Meredith E. Johnson and members of the State Museum staff for further remains of a mastodon found on the Ohberg farm. Mr. Charles Van Ness, secretary of the Society, stated that the contribution was voted after Clifford E. Dennis, superintendent of schools of Sussex County and president of the Historical Society, reported at a special meeting the finding of the skull of the 25,000-year old mammal in a low section of the farm which Ohberg was excavating for a private lake. Mr. Dennis interested Mr. Ohberg in contributing the head of the long-extinct beast to the State Museum and in holding up work while the state geologist and the museum staff searched. County road department men and equipment were used also under direction of County Road Supervisor Leon C. McKeon, and Senator George B. Harper (of Sussex County) obtained the use of other equipment from the State Highway Department and Conservation Department. Several bones were located in the search and museum representatives stated that sufficient parts of the skeleton had been uncovered to give a fair idea of what the mammal looked like when it was treading the hills of North Jersey.

The sixteenth annual meeting of the Historical Society of Princeton was held April 19 at the Quaker meeting house. Dr. Richard P. McCormick, president of the New Jersey Historical Society, spoke. Bruce French was re-elected president of the Princeton society.

The Historical Society of Plainfield has undertaken a project of restoring and preserving the Drake House, built in 1764, where Washington is said to have stopped on several occasions during 1777. It has been in the care of the Society for some years and now it has become a city project sponsored by Mayor Carlyle Crane, the American Legion, the D.A.R.'s, the Plainfield Historical Society, and a mayor's committee of prominent townsmen. It is proposed to build an addition for the use of the Legion in the rear of the building without destroying the authenticity of the original structure. Plans have been drawn for the proposed $100,000 structure and funds must now be raised.

The Society of Colonial Wars unveiled a bronze tablet at the William Trent House, Trenton, on May 7 commemorating its

builder, Judge William Trent, chief justice of New Jersey 1723-24, and four subsequent owners or occupants of the house—Lewis Morris, governor of New Jersey 1742-46, Colonel John Cox, assistant quartermaster general of the Continental Army, Philemon Dickerson, governor 1836-37, and Rodman McCamley Price, governor 1854-57. The main speaker was Louis S. Rice of Trenton. The following week the Trent House Association held its "Spring Flower Show of Arrangements in the Eighteenth Century Manner." Exhibitors came from many parts of New Jersey as well as Trenton.

The Atlantic County Historical Society helped Atlantic City celebrate its hundreth birthday at a dinner on March 2 in the Convention Hall. Forty of the members attended, many in historic costumes. Governor Meyner, state and local officials, and citizens who had attained honors outside the community were among the six thousand who attended the dinner, with six thousand additional for the entertainment in the evening.

On March 4 a monument was unveiled at Park Place and the Boardwalk at Atlantic City in memory of Jeremiah Leeds, the first permanent settler of that city. This was made possible by the Historical Society, the Antiques Collectors' Club, and the Atlantic City *Press*, which gave the money for the marker and had charge of the program. Paul M. Cope, president of the Society, impersonated Leeds.

The society has been the recipient of an interesting Indian collection from Mr. George Carpenter Connor of Philadelphia and Margate. Ninety per cent of the collection is from the locality of South Jersey and consists of arrowheads, tomahawks, bowls, pestles, and other artifacts, including a stone anvil, apparently copied from iron ones the Indians had seen used by the early colonists.

Descendants of the Somers family, Mrs. Florence Heyday Brooks, Mrs. Martin V. B. Scull, and Mrs. Samuel Johnson, who died earlier this year, bequeathed three Chippendale chairs, a Sheraton chair, and a rush-bottom chair originally from Somers Mansion. The bequest also included flat silver and hollow ware, most of which had come from the house. The entire bequest will be returned to the Mansion. Mrs. Samuel (Emma Cordery) Johnson also left Cordery family papers for the Historical Society's genealogical files.

As part of the Atlantic City centennial celebration, an exhibition of antiques of local and county families is being shown at the Garden Pier for one hundred days starting June 5 under the joint sponsorship of the Antiques Collectors' Club, the Atlantic County Historical Society, and the General Lafayette Chapter of the D.A.R., whose members are acting as hostesses. In this connection, tea is served at Somers Mansion every Tuesday in charge of Mrs. George H. Eckhardt, chairman of the House Committee.

Mrs. Eckhardt is very generously supplying the New Jersey His-

torical Society with a record of the holdings of the Atlantic County society's library, which will be most useful in the future in answering queries. We should welcome lists or resumes of the holdings of other societies throughout the state which would serve as a valuable means of referring people to the societies where needed material is at hand.

The Springfield Historical Society, founded in January of this year, reports a membership approaching three hundred. Their May meeting was held at the home of Mr. C. Harry Caspersen, at which Melvin J. Weig, historian of the Morristown National Historical Park, spoke and a film, "Williamsburg Restored," was shown to the 130 present.

It is learned that Rutgers University will present, as part of its adult education program, a course in New Jersey colonial history during the first semester of 1954-55. It is open to people of all ages interested in learning more about our state. The course will consist of three evening lectures and three field trips.

The opening lecture of the series will be held on Wednesday, October 6, 1954, at Rutgers University in New Brunswick. All lectures will be given by Dr. Richard P. McCormick, member of the University faculty and president of the New Jersey Historical Society. Dates for the remaining lectures and the field trips have been scheduled tentatively for Wednesdays during October, November, and early December. If the demand warrants, a second section of the daytime field trips will be scheduled for Saturdays.

The trips will include visits to areas with particular emphasis on Revolutionary association; areas which show colonial New Jersey as it is still preserved; a scene where New Jersey colonists celebrated their own Tea Party, in sympathy with their Boston compatriots; battlefields and Quaker meeting houses; birthplaces of famous patriots; the Pine Barrens of New Jersey with the deserted villages where cannon and munitions for the Continental Army were produced. In general, the course will endeavor to recreate the life in New Jersey during the seventeenth and eighteenth centuries.

Tuition for the course is $25.00, which includes lectures, bus transportation, and literature. Luncheon stop-overs will be arranged for the field trips. This course does not offer degree credit. Registration may be made, August 2 to the week of September 20, through New Brunswick Center, University Extension Division, Rutgers University, at 77 Hamilton St., New Brunswick, N.J.

The memory of Stephen Collins Foster was honored June 5 when the Hoboken Chamber of Commerce dedicated a bronze plaque on a three-story brick house at 601 Bloomfield Street. The ceremony commemorated the hundreth anniversary of Foster's residence in the house, reported to be the only building still standing in which he lived. It was here that he com-

posed "Jeannie with the Light Brown Hair."

A plaque was also unveiled by the Schoolmen's Club of Newark marking the location of the fourth tollgate of the Newark-Pompton Turnpike. The ceremonies were held at Barringer High School on May 17 and subsequent to that date the plaque was mounted on a ten-ton boulder near Bloomfield Avenue and the Branch Brook Park overpass at Third Avenue. The plaque reproduces an inscription from an original toll sign in the museum of the New Jersey Historical Society. The speakers at the ceremony included Dr. Edward F. Kennelly, superintendent of schools, Miss Miriam V. Studley of the Newark Public Library, and Michael R. McGreal, president of the Schoolmen's Club. It is the thirty-third plaque to be erected by the club.

The New Jersey State Highway Authority has appointed an Historical Marking Committee for the purpose of placing appropriate markers or otherwise identifying historic sites, people, and events along the route of the Garden State Parkway. Mr. E. L. Gerber, director of the Southern New Jersey Development Council, is chairman, and representatives from the New Jersey Historical Society, Sons of the American Revolution, Daughters of the American Revolution, and the Highway Authority are included in the make-up of the committee. An organizational meeting was held in Trenton on June 3. The real work of the committee, however, is not expected to commence until fall.

Rutgers University Library has received numerous collections of manuscripts pertaining to New Jersey during the first six months of the year. A partial list provided by the Library includes the following:

Records of the Aid and Detective Society of Franklin Park, 1878-1940; Samuel Lockwood's diary kept at Keyport in 1863 and his "Notes on Natural History" (mostly of Monmouth County, 1870's and 1880's); Samuel B. How papers, 1816-49, 160 items; the Howard A. Krumwiede collection on New Jersey postal history, including stampless and stamped covers, 517 specimens; records of the Ewing and Hopewell Vigilant Society, 1857-1946; papers of George O. Vanderbilt, 1869-1926, including political and transportation items, four boxes; twenty boxes of George Sykes papers, including three boxes of political correspondence (member of Congress 1843-47, New Jersey Assembly 1877-79), and 18th and 19th century surveys, etc., connected with his work as surveyor in Burlington and adjacent counties; William Kitchell papers in the 1850's as state geologist, three boxes; and address on Squankum history by J. P. Allaire, 1878; records of the West Windsor Pursuing and Detecting Society, 1882-1946, 143 items; records of the West Windsor Mutual Fire Insurance Association, 1857-1950; letters and papers of William

J. Hoagland, Paterson druggist, 1876-80; William Elmer papers of Bridgeton, 1808-79, largely bills and receipts of local merchants, one box; and minutes of the Humane Society of the City of New Brunswick, 1886-1951.

At the occasion of the celebration of the three-hundredth anniversary of the landing of the Jewish pioneers and pilgrims, the Newark Public Library will present an exhibit of documents and materials relating to the contribution of the Jews to American culture and progress. Because of location and circumstances, the state of New Jersey has been a specially fertile field of endeavor and achievement by American Jews, a fact which will be emphasized in the exhibit.

Many learned societies, notably the American Jewish Historical Society, are contributing to this exhibit which will open with a reception on Monday, September 20, at 7 P.M. in the lecture hall of the Library.

The roster of historical societies in New Jersey was increased when in May of this year the Barnegat Light Historical Society at Barnegat Light was organized. It is very fortunate in having been deeded a former schoolhouse for its headquarters, the dedication of which will be held on July 10. Mrs. Charles Butler has been elected first president.

WORKS IN PROGRESS

Professor Dieter Cunz, Foreign Language Department of the University of Maryland, College Park, Md., is preparing an article on the history of the German influence in Egg Harbor City, New Jersey. He would be most grateful to anyone of our readers who might give him information or could call his attention to historical material pertaining to the subject. Dr. Cunz is particularly interested in locating old files of early German newspapers of Egg Harbor City.

Miss Sally Burk of the New Jersey State Teachers College near Paterson is gathering information on education in Paterson.

SPEAKING OF GIFT HORSES

In conjunction with an exhibition on "The American Family—1875," tentatively scheduled for early next year, we are looking for a typical cast-iron kitchen range and an ice box of the period. Does anyone know where one is to be had? It is also very possible that we shall wish to borrow, if one is not otherwise forthcoming, a bedroom set of about 1875—a bed, dresser, and chair in the Eastlake tradition. We would be most appreciative of information as to where any of these items can be procured.

NEW JERSEY IN PRINT

MIRIAM V. STUDLEY

Scholars are agreed on the conspicuous lack of an adequate bibliography of New Jersey history. Were it possible for a group of interested organizations to compile a union catalog of library resources in Jerseyana, even without itemizing the holdings of each library, we should have a valuable working tool. This would be a tremendous undertaking, perhaps, but worthy of co-operation by public, county, and historical libraries throughout the state.

Some help toward a finding list of recent acquisitions by New Jersey libraries comes in the bulletins of historical societies and university libraries. The *Journal of the Rutgers University Library* for June reports a number of useful manuscript accessions relating to New Jersey. These are noted elsewhere in more detail by Mr. Wall in his "Director's Diary" department. Also described is the Library's collection of Fourth of July orations, many of which are by New Jersey clergymen and orators.

Princeton University Library in its *Chronicle* provides a helpful description of the library of the Industrial Relations Section of the University's Department of Economics and Social Institutions. For over twenty-five years the Industrial Relations Section has been collecting the publications of companies and unions. It now has bulletins, reports, proceedings, etc., from six hundred companies and nearly two hundred unions. Many of these are New Jersey firms and labor organizations. The material is carefully analyzed and indexed. Hazel Benjamin is librarian.

The Camden County Historical Society publishes a leaflet, *History Begins at Home,* describing its holdings, in museum objects, photographs, prints, and post cards. Its library includes the "most extensive file of bound newspapers and periodicals in South Jersey," card files of marriage and death records and cemetery inscriptions, directories, and fifteen hundred books and pamphlets. Deeds, wills, and legal papers are cross-indexed for ready reference.

In the *Yearbook* of the Atlantic County Historical Society, October 1953, Paul M. Cope, president, states that the Society has copied from the original records in Philadelphia hundreds of names from the Great Egg Harbor-Cape May Monthly meetings of the Religious Society of Friends.

Section II of the April *Numismatist* consists of a catalogue of the American Numismatic Society library in New York City. Included are a number of monographs relating to New Jersey coins and medals.

Even more difficult to locate than books are the manuscript sources of New Jersey history. The lack of finding lists for New Jersey manuscripts is brought to mind by the appearance of the second edition

of a *Guide to the Principal Sources for Early American History in the City of New York,* revised by Richard B. Morris (1953). New Jersey historical and biographical material in New York libraries is located by this valuable reference tool.

The magazine *Manuscripts,* formerly the *Autograph Collector's Journal,* in its Winter 1954 issue has a section headed "Where Do Manuscripts Go? Random Notes on Recent Acquisitions of Our Institutional Members." From it we learn that Columbia University has acquired "some 1200 manuscripts, letters, and memorabilia, comprising the Stephen Crane papers, 153 letters by Dr. Elizabeth Blackwell, and about 1150 Woodrow Wilson papers."

The Stephen Crane papers consist of Cora Crane's collection of manuscripts, family papers, and letters to the author and his wife from American and British authors. The collection is described in *Columbia Library Columns,* February 1953, in "An Unwritten Life of Stephen Crane," by Daniel G. Hoffman.

According to the new bulletin of the Burlington County Historical Society, its museum owns a number of books from Atsion Furnace, recording daily transactions, and throwing light on village life in a bog-iron industrial community.

The Gloucester County Historical Society has received two manuscripts, "The Background of Mullica Hill" by S. Stewart Joslin, Jr., and "History of Mullica Hill Friends' Meeting," prepared for the 150th anniversary of Mullica Hill Friends' Meeting in 1947.

The *Bulletin* of the Institute of Historical Research, November 1953, published by the University of London, includes a department that might well be copied by some American historical journals. Headed "Historical Manuscripts," it lists family and public papers acquired by various record offices; but, even more interesting, under the heading "Migrations" it lists by dealer and catalog number manuscripts offered for sale. One group of documents, 1748 to 1787, relates to the "claims of Barnardus La Grange for the loss of his estate in New Jersey." (See Jones, *Loyalists of New Jersey in the Revolution,* p. 122.) Librarians and individuals who have funds for purchase of manuscripts on colonial and Revolutionary New Jersey may profitably examine this scholarly British quarterly.

Reference has been made in earlier issues to the increasing use of microfilm in the reproduction and duplication of the materials for historical research, such as newspapers, documents, bibliographies, indices, etc. Attention should be called also to the *Microcard Bulletin,* issued by the Microcard Foundation, Middletown, Conn. This foundation is one of several agencies producing and distributing microcards. There are four microcard printing plants and "over sixteen hundred microcard reading machines are now in use in United States libraries alone." There is also a Microcard Committee, a national committee of librarians, advising the producers on development of microcards for library use.

The *Microcard Bulletin* for April 1954 (No. 14) contains "A Selected Few of Our Microcarded Titles in American Genealogy and Local History." Three titles listed specifically for New Jersey are Stryker's *Official Register of the Officers and Men of New Jersey in the Revolutionary War,* Raum's *History of the City of Trenton,* and Cooley's *Genealogy of Early Settlers of Trenton and Ewing.* Several family histories of New Jersey interest are also available on microcards, as well as back files of leading periodicals in the field of genealogy. Prices for cards range around one-fourth the cost of the same text in book form.

The editor of this department would be glad to learn of microcards and reading machines in New Jersey libraries. The Newark Public Library owns a microcard reading machine, which is used at present chiefly for scientific materials. Both microcard and microprint readers are available in the Rutgers University Library.

REVIEWS

The first review below is by Adrian C. Leiby, a native and resident of Bergenfield. He is a graduate of Middlebury College and Columbia University Law School (1929), and is a member of the New York law firm of LeBoeuf, Lamb & Leiby.

The Valley of Homes. By Ryerson Vervaet. Oakland: Fiftieth Anniversary Committee, 1952. 114 +xi pages.

"Once there was Indians all over this place," a large sign in the center of Oakland used to proclaim to passersby in that valley of homes along the banks of the Ramapo. After the Indians, Bergen County Dutchmen—the Ryersons, the Garrisons, the DeBauns, the Demarests, Hoppers, Van Winkles, and others—took over those fertile farmlands which made the frontier of the earlier settlements along the Hackensack and the Acquackanonk, and held them for two centuries. Here and there along the maple-lined main street of Oakland are Dutch colonial houses which are the monuments of the sturdy Dutchmen who dared to leave the older settlements and move to the then northern wilderness. The Dutch called the place the "Panna," the Ponds, a name still honored in the Ponds Dutch Reformed Church, that venerable institution which has served the people of the Ramapo valley for almost two hundred and fifty years.

These early settlers were men and women of sobriety and industry, whose interests centered in family life and in the church. Their houses, small two-story structures of rough stone cemented with mortar made of clay and hogs' hair, had their main rooms on the ground floor, the upper story being used for storage. Mrs. Vervaet writes of the lives of these men and women with every mark of solid research, never patronizing her sturdy ancestors with kindergarten tales of their quaintness.

The Ponds, on the Continental mail route from New England to the South, often found itself headquarters for Washington's armies

during the Revolution. Patriots, Tory gangs from the Highlands, and British raiders knew the valley of the Ramapo well, and the author has collected a good deal of material about Revolutionary War activity there. "One legacy left by the Revolution to the Ramapos was the 'Jackson Whites,' who found their way to the nearby mountains." Their full history can probably never be reconstructed, and the author gives the best of the guesses about their origins. The occurrence among them of an occasional Dutch name is probably living evidence that many Dutch Tories were neither as rich nor as well-connected as their latter-day partisans would have us think.

The turnpikes and the railroad destroyed the self-sufficient farm life of the Ramapo valley forever; for a time the water power of the river and its tributaries brought an era of small-factory prosperity: gristmills, brush factories, even a powder mill. It is now rapidly filling up with ranch houses and suburban development. (The railroad brought the Ponds the further blessing of a pretty name, Oakland being but one among the happy suggestions for improvement in that way: Brae Cliff, Scrub Oaks, Oakdale, Pleasant Valley, DeKalb, and Bushville. Oakland won by three votes.) The later history of the borough, carefully researched by the author, is not dissimilar to that of other rapidly expanding semi-suburban towns of New Jersey, though the author has been more than usually perceptive in reporting the tensions between the old resident and the newcomer.

The *Valley of Homes* begins with a truly poetic description of nature's yearly cycle in this Jersey country of ours; it ends on a hopeful note of planning a town for a future which will maintain the traditions of its Dutch founders. Written with imagination and authority, it somewhat lacks the irrelevant but fascinating small-town folklore that so often passes for local history; it more than makes up for this lack by careful research and literary skill in telling a local story in its true setting of more than local history.—A. C. Leiby.

Basic Data Assembly in Planning for State Socio-Economic Regions, Designed to Be Used with Regional Analysis: Socio-Economic Region II, the Trenton-Camden Metropolitan Area. By Gerald Breese. Trenton: Department of Conservation and Economic Development, in Co-operation with the Bureau of Urban Research, Princeton University, 1954. 25 pages.

This guide, singled out from the report it was prepared to accompany, has in itself high value for those making social, industrial, or planning surveys of any section of New Jersey. Fundamentals of research in urban sociology are outlined and essential data are enumerated. There is constant, specific reference to examples in tables and charts in the reports, *Regional Analysis,* listed below. Both volumes should be useful in college courses in New Jersey geography. —M.V.S.

BOOKS AND PAMPHLETS

The Gloucester County Historical Society announces the preparation of the final issue of *Gloucester County in the Civil War,* edited by Raymond S. Archut. Publication date is not yet announced. *Notes on Old Gloucester County,* also by Mr. Archut, appearing in weekly installments in the Woodbury *Daily Times,* will eventually be published as a pamphlet by the same society.

The Burlington County Historical Society is now sponsoring the sale of George DeCou's *Burlington, Provincial Capital,* recently reprinted, as well as his other volumes, *Moorestown and its Neighbors* and *Historic Rancocas.*

Open House in Princeton, a leaflet announcing a tour conducted in May 1954 for Radcliffe and Mount Holyoke Alumnae Scholarship funds, is of permanent interest for its brief descriptions of important historic houses under private ownership. For copies of the leaflet address Miss Helen Baker, 120 Prospect Street, Princeton.

The Atlantic City Centennial and Diamond Jubilee of Light Association at 8 Central Pier, Atlantic City, has for free distribution a variety of printed material on the celebration. Included are a detailed tentative program for the year, a large colored brochure, a preview of '54, and a smaller folder with photographs contrasting present and past.

Annual Report to the Governors and Legislatures of . . . Pennsylvania, and . . . New Jersey. (Morrisville, Pa.: Delaware River Joint Toll Bridge Commission, 1954. 95 pages.) Copiously illustrated, gives brief history of each of 16 bridges across the Delaware.

An Introduction to Standard Oil Company (New Jersey). (New York: Standard Oil Company of New Jersey, 1954. 20 pages.) Revised edition. A concise history, 1822 to date.

New Jersey Activities, 1954. (Trenton: State Promotion Section, Department of Conservation and Economic Development, 1954. 45 pages.) Date book lists celebrations, fairs, conventions, sports, exhibits.

New Jersey, the Dynamo of the Nation. By Carroll M. Shanks. (Newark: State Chamber of Commerce, 1954. 12 pages.) Address of acceptance of the 1953 award to the "Outstanding Citizen of New Jersey" by the Advertising Club of New Jersey.

New Jersey, the State and its Government. By Leonard B. Irwin. (New York: Oxford Book Company, 1953. 124 pages. Price 90 cents.) Second revision of the 1942 text on state, county, and municipal government by the principal of the Haddon Heights High School. Includes information on the Optional Municipal Charter Law.

The New Look in Newark. By Henry W. Connor. (Newark: Bureau of Municipal Research, 1954. 7 pages.) Address to Newark Kiwanis, May 20, 1954.

1950 U.S. Census Population Data of Newark, N.J., by Census Tracts. (Newark: Central Planning Board, 1954. 28 pages.

Price $2.00.) Detailed statistics on social, economic, and ethnological characteristics of Newark's ninety-six census tracts, secured from the U.S. Bureau of the Census by the Planning Board for a group of social, civic, and government agencies.

Public Welfare in New Jersey, 1953, a Statistical Review. (Research Bulletin Number 116.) (Trenton: Bureau of Social Research, Department of Institutions and Agencies, 1954. 14 pages.)

Regional Analysis, Trenton-Camden Metropolitan Area, a Study of the Economic Factors Affecting Development in New Jersey along the Delaware River. By Gerald Breese. (Trenton: Department of Conservation and Economic Development, with the Bureau of Urban Research, Princeton University, 1953. 109 pages. Price $3.00.)

Scenes and Portraits, Memories of Childhood and Youth. By Van Wyck Brooks. (New York: E. P. Dutton & Co., Inc., 1954. 243 pages. Price $4.50.) The author's youth in a "Wall Street suburb," Plainfield.

The Valley Green, Passaic Valley High School. (Little Falls, N.J.: Published by the Senior Class of 1954. 84 pages.) This high school year book successfully carries out a local history theme with short descriptions of the life of early settlers, and line drawings, prints, and photographs of historic sites.

Waterfront Investigation, Hearings before a Subcommittee of the Committee on Interstate and Foreign Commerce, United States Senate . . . on Waterfront Racketeering and Port Security, Part I: New York-New Jersey Waterfront. (Washington: Government Printing Office, 1953. 699 pages.)

THE PERIODICAL PRESS

A new historical magazine appeared in New Jersey with *Bulletin* Number 1 of the Burlington County Historical Society, April 1954. This attractively printed four-page publication is sent free to all members. Annual dues to active members are one dollar. The magazine is readable and informative.

The June 1954 issue of *New Jersey County Government* salutes Cape May County.

Art in America for May 1954 is devoted to examples of American primitive painting from the collection of Mr. and Mrs. Edgar William Garbisch, recently given to the National Gallery of Art in Washington. Six paintings found in New Jersey are illustrated.

The magazine of the American Jewish Historical Society announces an essay contest to stimulate interest and research in American Jewish history. The contest, open to graduate and undergraduate students in recognized schools of higher learning, closes September 1, 1954.

The *Antiquarian Bookman* now is published in Newark, having been sold by the R. R. Bowker Company to its editor, Sol M. Malkin.

LOCAL AND FAMILY HISTORY

"Activities of the N.J. State Department of Health in Tuberculosis Control, 1900-1953," by William J. Dougherty, in *Public Health News,* April 1954, pp. 143-53.

"Agriculture in N.J. Counties: Warren County," by Fred Lorenzo, in *New Jersey County Government,* May 1954, p. 22.

"America's Oddest Piece of Real Estate," by Richard Thruelsen, in *Saturday Evening Post,* April 17, 1954, pp. 28-29 *ff.* Sandy Hook, New Jersey.

"Apples in America," by David Shulman, in *American Speech,* February 1954, pp. 77-79. A list giving named varieties of New Jersey origin, from early nineteenth-century sources.

"Archival and Editorial Enterprise in 1850 and in 1950; Some Comparisons and Contrasts," by Lyman H. Butterfield, in *Proceedings of the American Philosophical Society,* June 15, 1954. Includes pointed remarks on the lamentable neglect of New Jersey archives by the public officers of this state.

"Barnegat Light," in *New Jersey Outdoors,* May 1954, p. 21. Brief historical account.

"Concessions and Agreements of 1676," by Dr. Henry H. Bisbee, in *Bulletin of the Gloucester County Historical Society,* June 1954, p. 14.

"Early American Medalists and Diesinkers Prior to the Civil War," by Richard D. Kenney, in *Coin Collector's Journal,* January-February 1954, pp. 1-24. Includes seven New Jersey engravers.

"European and American Silver in the Newark Museum Collections," by Margaret E. White, in *The Museum,* Summer-Fall 1953, pp. 1-33.

"Essex Freeholder, as Coin Detective, Discovers 1st N.J. Mint Was at Rahway," by Gloanna Wallace MacCarthy, in *New Jersey County Government,* June 1954, pp. 34, 37. Damon G. Douglas participates in dedication of memorial tablet on Koos Brothers' store, Rahway, site of first New Jersey mint at Daniel Marsh's grist mill, 1786.

"Fifty Years of Tuberculosis Control in New Jersey from the Viewpoint of Education and School Health," by Lula P. Dilworth, in *Public Health News,* April 1954, pp. 137-39.

"First Gloucester Old Church Day" (historical tour), in *Bulletin of the Gloucester County Historical Society,* June 1954, p. 15.

"A Genealogist Reports on Jersey Dutch," by Richard Schermerhorn, Jr., in *De Halve Maen,* April 1954, pp. 6-7 *ff.*

"Gilbert Tennent, Dynamic Preacher," by Frederick W. Brink, in *Journal of the Presbyterian Historical Society,* June 1954, pp. 91-107.

"Greetings," by Governor Alfred E. Driscoll, in *Public Health News,* March 1954, pp. 68-69. Summary of accomplishments in alcoholism control, 1951 to date, given at a conference on alcoholism, Decem-

ber 16, 1953.

"Highways," in *Bulletin of the Gloucester County Historical Society,* June 1954, p. 16. Seventeenth-century origins of today's highways.

"Historical Quiz," in Burlington County Historical Society *Bulletin,* No. 1, April 1954, pp. 3-4.

"The Izard Family," in *Bulletin of the Gloucester County Historical Society,* June 1954, p. 15.

"James Logan, Proprietary Agent," by Albright G. Zimmerman, in *Pennsylvania Magazine of History and Biography,* April 1954, pp. 143-76. Agent for William Penn, who had many business relations with William Trent.

"John Cooper House," in *Bulletin of the Gloucester County Historical Society,* June 1954, p. 1.

"Lafferty's Elephant, Patented 1882," in *Journal of the Society of Architectural Historians,* May 1954, p. 28. Building still standing at Margate, N. J.

"Legend of the Lenape," in *Science Monthly,* January-February 1954, pp. 4-5.

"Lippincott Bible Records," by John P. Dornan, in *Genealogical Magazine of New Jersey,* April 1951, pp. 43-46.

"Monmouth County Gravestones: Allen Family Burying Grounds," in *Genealogical Magazine of New Jersey,* April 1951, p. 46.

"New Jersey's First Railroad," by N. R. Ewan, in Burlington County Historical Society *Bulletin,* No. 1, April 1954, pp. 1-3.

"New Letters of George Whitefield, 1745-46," edited by John W. Christie, in *Journal of the Presbyterian Historical Society,* June 1954, pp. 69-90.

"Newark Mountain Purchase Claim," by William Y. Pryor, in *Genealogical Magazine of New Jersey,* April 1951, pp. 37-38. Names from a 1764 map in the New Jersey Historical Society.

"Ocean City's 'Jubilee Year' Marks 75th Anniversary," by Dr. Norman Sargent, in *New Jersey County Government,* June 1954, pp. 13-14.

"One Hundred and Fifty Years Ago at Historical Display at National Newark and Essex Bank," in *Suburban Life,* April 1954, pp. 6-7.

"Ornate Gates of Helis Stock Farm Near Jobstown," in Burlington County Historical Society *Bulletin,* No. 1, April 1954, p. 4.

"Phillipsburg," by R. H. Yard, in *New Jersey Bell,* December 1953, pp. 8-11.

"Potentialities of Industrial District Development," in *Review of New Jersey Business,* April 1954, p. 10. History of planned industrial districts in New Jersey, beginning with Paterson's SUM, 1791.

"Prosecuting the Revolution," by Richard C. Haskett, in *American Historical Review,* April 1954, pp. 578-87. Courtroom battle against subversion as revealed by an investigation of Hunterdon and Somerset County and New Jersey Supreme Court records.

"Records of the Dutch in Union County," by Walter H. Van Hoesen, in *De Halve Maen,* April 1954, pp. 8-9.

"Reminiscences of Admiral Edward

Shippen: Bordentown in the 1830's," in *Pennsylvania Magazine of History and Biography,* April 1954, pp. 203-30.

"Roads That Were Paid for But Never Built," in *New Jersey Autoist,* May 1954, p. 10. Diversion of highway funds in New Jersey, 1927 to the present.

"Salem County, N.J., Marriages, 1682-1703," by Lewis D. Cook, in *American Genealogist,* July 1954, pp. 178-84.

"Sayre, Sharpless and More Family Burial Records," by Charles M. Jones of Bridgeton, N.J., in *Vineland Historical Magazine,* January-April 1953, pp. 98-101.

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"Walt Whitman: the Oscar Lion Collection," in *Bulletin* of the New York Public Library, May 1954, pp. 213-29. Catalogue with introduction by Lewis M. Stack; to be continued.

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GOVERNOR WILLIAM BURNET, 1730-1791

Copy of a plumbago (graphite or pencil) drawing made by the artist John Watson of Perth Amboy. This portrait is one of the thirteen Watson drawings presented recently to the New Jersey Historical Society by Mrs. Lucien B. Horton. Burnet was colonial governor of New Jersey, 1720-27.